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February 1994

BOARDWATCH MAGAZINE

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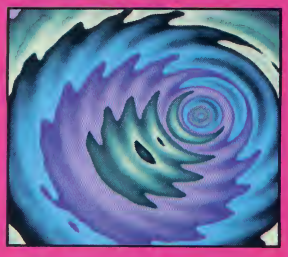
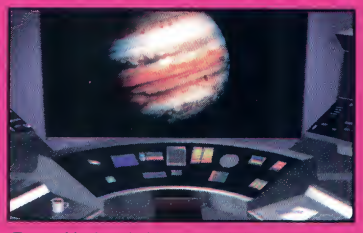
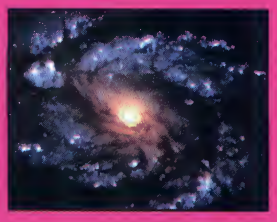


Tim Stryker's Computer Art - 32



Event Horizon's Voyager III Multimedia Tour of the Solar System - 33

Dvorak Online - Rituals and the Computer - 26



Bowen on CompuServe New Hubble Space Shots Available - 40

Table of Contents

Editor's Notes 8

Sea Change - 1994

Letters to the Editor 10

Dvorak Online 26

Telebits 28

Rumors & Factoids 28
Microcom Introduces 28.8 KPBS V.FAST Modems With Interface 29
Galacticomm Announces Major BBS Version 6.2 29
QmodemPro for Windows Released 31
Andy Warhol GET BACK! - Tim Stryker's DIB Art 32
Event Horizon's Voyager III Multimedia Tour of the Solar System 33

Bowen on CompuServe 40

California's Communication Devastation From the Quake De-fused Timely Forums and Great Graphics Available

Access to Government 46

Government Decisions: Who's Buying Them? Who's Selling?

Macintosh BBS News 50

Tex-Mex Mac BBS 50
Internet Gateway for Telefinder 50

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Internet Books Reviewed - 59

54 EDUCATION LINK

54 Wheels for the Mind

56 INTERNET NEWS

57 Internet Index: Facts and Figures for '93
57 Gore Endorses EFF's Open Platform Approach
58 EFF Board's Kapor and Dyson Appointed to NII Advisory Council
59 EFF Helps to Eliminate Outrageous Sentences for Computer Crimes
59 Book Reviews
60 Chameleon - TCP/IP for DOS

68 TAKIN' IT ON THE ROAD

68 Surviving the Trauma of Traveling With Your Laptop

83 LEGALLY ONLINE

Freedom of Speech Under Fire

88 DIRECT DIAL

88 DSC/VoiceNet
90 The Nashville Exchange
92 The Real Estate Shop BBS & The Delight the Customer BBS

LIST DIRECTORY

24 Modem Watch
67 UUCP Host List
80 Software Vendors List
94 Business & Professional BBs
96 Real Estate BBSs
100 List of List Keepers
114 National List

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*Picture shows complete 16 user TBBS/TDBS System.

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EDITOR'S NOTES

SEA CHANGE - 1994

It is easy to pick out the key developments and historical signposts that led to techno-social advances from the comfortable distance afforded by the passage of time. When you are actually in the gale, steering the ship, bailing water, paddling, and manning the sails during the storm, the world is a bit more chaotic, and the ultimate outcome considerably less clear. That said, there are occasionally indications of a change in wind and sea important to navigation. The opening days of 1994 bring us omens and signs that portend a future for this online community most encouraging to the sailors and helmsmen working the decks and halyards these many years at sea.

One of the most encouraging for me personally has been a sea change in the way the general media approaches the online story. The bulk of cyberspace actually resides in the cerebral cortex of those who use this medium. Some element more is embodied in tonal changes and phase shifts carried via tiny copper and glass threads and in many cases invisible oscillations of the ether. And finally, it is physically carried on the invisible magnetic alignment of tiny bits of ferrous sand scattered across the top of spinning disks sealed from the view even of dust. There is little to photograph, little to televise, and little to perceive by those not involved in the experience. Though it is a thoroughly rich medium sufficiently advanced to engage some 14 million Americans, it's a little hard to explain in a 90-second sound bite. All told, it's a hard beat to cover for the general media, and in the past they've grabbed what story angles they could, mostly revolving around online pornography, extremist movements, and the odd text file describing how to make a pipe bomb. In other words, they've taken formulaic stories and applied them to an online connection. Virtually no one outside of the computer press has actually done a story really covering the online community at all - John Markhoff of the New York Times and Joe Abernathy, late of the Houston Chronicle, possibly excepted. Recognizing the problem, we at Boardwatch had rather taken it on as a mission to aid and abet the efforts of any journalist who appeared genuinely interested, in any way we could, and without regard to the competitive nature of publishing or our role in it. We currently have nearly 400 journalists across the country that receive *Boardwatch* each month, and probably handle 12-15 calls weekly from those seeking that extra bit of cyber-trivia.

The closing days of 1993 saw an *ABC Prime Time Live* story of some 20 minutes that actually attempted to capture the why and what that draw people into the online community. *NBC Nightside* actually ran a week long series covering online services and what was developing there. Both were surprisingly insightful pieces of work. The *Wall Street Journal*, *U.S. News and World Report*, *Time*, *Businessweek*, and the *New York Times*, along with scores of less august publications have all weighed in with pretty substantive pieces in the final quarter of 1993. And these early attempts to actually cover the ground in the general media is moving the development of the genre in a very positive way. This kind of story is very different from the formula pieces of just a year ago, and millions of Americans, who have been peripherally but vaguely aware of the online activity, are gaining some insight into "what all those people do" online.

There are other signs of the times. Vice President Gore was a featured guest on a **CompuServe** chat forum last week and also delivered a couple of addresses covering the National Information Infrastructure proposal. It's probably requisite that we note that this is no new found religion here politically pertaining to his Vice Presidency. We have followed this man steadfastly insisting on this data highway for as long as *Boardwatch* has been in publication - some seven years at this point - and found little Al Gore footprints in the online sand preceding even that. His vision of a National Data Highway is very real, very sincere, and spans a decade of demonstrated dedication. The vice-bully pulpit is very real, and we can see signs of this leadership having an effect most broadly.

The big money is also taking note of the burgeoning interest in this field. What was once an oddity they weren't sure had any potential life has become the ship to get aboard. **CompuServe** is reporting the addition of some **60,000** new members each **MONTH**. America Online claims they added some **150,000** accounts during the last 90 days of 1993 bringing them to a half-million strong. On the day of the Los Angeles earthquake, **Prodigy** reported some **813,000** logons with over **11,000** messages in a special bulletin board they had set up to allow Southern California residents to communicate with the rest of the country. Since the first official act of the telcos was to close long distance access to the area, this was nearly the only way to quickly get a message out to family or friends in other parts of the country.

And in the realm of bigger money yet, the telcos are basically forfeiting the field. Acknowledging the coming competition in the local loop, GTE has announced they are cutting **17,000** jobs, Pacific Telesis **10,000** jobs, and virtually all remaining local RBOC pondering the future of communications. MCI, meanwhile, who has had a toe in the Internet waters for several years, has announced they are just going to go build their own **$20 billion** Internet, and that they are going to provide local telephone services as well. . Southern New England Telephone has likewise announced a **$4.5 billion** investment in data superhighway covering Connecticut, and they plan to have nearly half of all Connecticut households hooked up within three years. Cable companies point out that they too can hook you up to the net. And you can't pick up a piece of paper anywhere without finding the words National Data SuperHighway on it somewhere it would seem.

Substantial new services are appearing en masse. Apple Computer introduces their **eWorld** service in April. Microsoft continues to insist their **InfoServe** service is a secret. We found most interesting a January announcement by Ziff Davis of their own new online service. The Ziff Desktop Information subsidiary, which has operated Ziffnet on both CompuServe and Prodigy for some time, is changing their name to **Ziff Davis Interactive** and announcing a new commercial service titled **Ziff Davis Interchange Online**. Having previewed it, we found it to be the most innovative new magazine publishing platform we've yet seen with a Windows interface, photo-realistic images and a hypertext "shared data space" that has to be seen to be believed. It is absolutely a quantum leap in electronic publishing and appears just at the time

when magazines and newspapers across the country are waking up to the fact that an electronic component is required for success in the future..

Additionally, pricing is dropping - **CompuServe**, the last bastion of tyrannical pocket gouging, dropped connect time charges **40%** across the board in January - largely in an effort to quash the **America Online** movement. This will apply enormous price pressure to the second tier services who have made enormous gains largely because they were a cheaper alternative.

A couple of questions come immediately into play from the cynics and non-believers. First, is it real? Are we headed for compuglut? Can there be that many callers? And the follow-up comment is that it will all be taken over by the big money boys and no one else can play.

With regards to the first. Yes, it is very real. It is real because it is caller driven, not provider driven. And the move to "get online" may actually take on some of the mania aspects of CB radio in 1994. Again, I will be pasted as the raving madman in this, but I will publicly bare my lunacy here - **I think we *will see a SHORTAGE* of BBS's and online services by the close of the year.** You read that right - a shortage. The fuse has effectively hit the powder keg. America Online appears to already be stumbling in providing adequate connections for their caller base. Internet host providers are actually going face down NOW in a quagmire of dashed expectations of their holy UNIX operating systems as real callers who actually want to use it literally swamp the little UNIX boats as we watch. By the end of the year, even CompuServe and Prodigy, with really pretty excellent X.25 network designs, just won't be able to keep up the pace. It is possible that the entire online infrastructure by the close of this year will be one massive, frenzied, frustrated busy signal.

Regarding the small operation. MCI et al are building a national data superhighway. But this implies a road leading to somewhere. Roads, and specifically communication networks are inherently commodity businesses with incredible volume, but no margin. As an entrepreneur, you don't want any of it if they gave it to you. The fruitstands and vegetable markets lining this highway - the value added "destination" type operations face literally, and I mean literally literally, UNLIMITED opportunities that just benumb the mind to contemplate. It is classic Americana. A new frontier where the little guy with an imagination, guts, and a little hard work can make their fortune and Horatio Alger proud.

The other element, sorely lacking and lacking for sometime in the future, is adequate software tools to deal with it all. We are building starships with butter knives and garden hoes. Software developers who are NOT turning their sights on communications for the masses, have simply gone deaf, blind and stupid in preparation for their upcoming bankruptcy, office furniture auction, and demise.

This explosive growth in both the breadth and depth of the online world has driven some changes at Boardwatch as well. We had pictured a series of other publications joining the fray, each staking out an area of the

online turf and covering it well. I rather had fantasies of gatherings of online journalists in hotel lobbies at conventions and such with much backslapping and gin swilling and professional comraderie complete with inside jokes, gossip, and rumors in a clubby atmostphere. So far, the entries have been disappointing parodies of Boardwatch - covering the same stories, and in one case actually using the same cover photo. Gads.

So we need to either accept that we can't cover it all, pull in our horns, and mark off a specialized section of the online world and let the rest go to whatever coverage they can find where they can get it, or we have to take it all on - a bit of a frightening prospect frankly. It's a bit like standing on a mountain and looking south and west over the deserts of Arizona and New Mexico (you can actually) with someone suggesting "You could pave it you know." Things are literally popping everywhere - Internet, commercial services, small bulletin boards, telcos and cable, government, legal issues, and more. But after a lot of agonizing, we've decided to take our best shot at providing more comprehensive coverage of all of it. We may not survive it, but on the other hand, shaving of a morning could get difficult if we don't at least attempt it.

Clearly we can't do it alone and I'm a little picky about what goes into the rag. I've admired the work of **John C. Dvorak** for many years and was most pleased he chose to join us with the January issue to good effect. In the months to come, we'll be introducing a whole series of new columns. **Alfred Glossbrenner**, a noted computer book author who has done many books on online services, and in fact one of the earliest published books on using a modem, is going to join us with a regular column. **Charles Bowen**, a very experienced writer of the online genre we've admired for years has agreed to do a CompuServe column. **Harley Hahn**, author of two current hit books on the Internet and a longtime UNIX and Internet aficionado is joining us with an Internet column. And by the close of the year, I would expect to have individual columns and columnists covering every major online service in the country - with news and reviews absent the maudlin public relations flack detritus most users on these services are accustomed to reading. This without ceding anything of our grassroots BBS coverage. We intend to do it, and we intend to do it well. Fair warning - if you leave a modem connected to a telephone line overnight by accident with Procomm host mode on it, you just might wind up as a feature story.

It's a sea change - 1994. Not for the faint of heart. Stay with us.

Jack Rickard
Editor Rotundus
Boardwatch Magazine

LETTERS TO THE EDITOR

Address correspondence to **Letters to the Editor**, Boardwatch Magazine, 8500 West Bowles Ave., Suite 210, Littleton, CO 80123; by fax to **(303)973-3731**, or by electronic mail to **letters@boardwatch.com**. All letters so addressed are the property of Boardwatch Magazine, and are subject to editing, although I can't recall ever having done so. It could happen I guess.

Dear Mr. Rickard:

Playboy now has an email address on the Net (**Playboy@class.com**) that we'd like to function as a meeting area and forum for the discussion of a diversity of issues including, but not limited to, computer privacy, electronic First Amendment issues, any reader's response to the magazine in general and as a contact point for Playboy's electronic products. Eileen Kent, has been the point person for our entrance into the new media, is heading this project. Working with her are Anne Steinfeldt and myself, Matthew Childs, a Playboy associate editor.

Once, we're up and running, we will have specific scheduled times for real-time interactions with me and other editors. In the mean time, we will be downloading and disseminating all email to the appropriate people. We believe that this will be an informative and beneficial method for Playboy and those online who want to comment on Playboy to interact. To that end, we hope that you would see fit to publish our e-mail address/and or this letter.

Thanks for your time and encouragement.

Sincerely,

Matthew Childs
associate editor
Playboy Magazine

Dear Mr. Childs:

I see so fit. Good, luck on, your new, electronic adventure. We're seeing much of the traditional print media finally catching on to the advantages of electronic interaction with their readership, and in almost all cases to good result.

I would note that your aspirations for this e-mail address may be a little ambitious. An electronic mail address is not normally a good "meeting area and forum for discussion," rather, normally a point of contact. I might suggest use of a Playboy "mailing list" if you genuinely desire a meeting place to discuss issues. This works much like an e-mail address, but correspondents can "subscribe" to the list, and all correspondence directed TO the list address is resent or "reflected" to the entire list of correspondents. In this way, true interaction can occur between all list correspondents and a meeting place is formed. Your internet host provider can set this up without much difficulty actually.

Again, good luck with your online efforts.

Jack Rickard

Dear Mr. Rickard:

I read your editorial in the January issue of Boardwatch on the need for cybercash. Here in New Jersey, I am working with several state legislators on a telecommunications initiative which (hopefully) will include making state records available on the Internet, starting a project Gutenburg type thing with the state library, and promoting the use of electronic cash. If any one of your scholarly readers has come up with a nifty idea for cybercash, I'd be much appreciative if you could FAX me the idea. The number is listed below.

Thanks

Joshua Rosenblum
District Operations Officer
Majority Office
General Assembly of New Jersey
(609)633-9806 fax

Dear Mr. Rosenblum:

I was once told that there really were only three necessary functions of a government:

1. Provide for national defense.

2. Maintain domestic civil order.

3. Establish and maintain a stable currency.

We seem to have taken on a lot of additional functions at the national, state, and local level. I guess I somewhat nostalgically wish we'd of knocked out at least two of the big three somewhere along the line. Actually I do think the ultimate solution to the cybercash problem will have to come at a national level, but as these things go, someone will likely have to derive a solution for them to bless. They're not particularly good at generating these things internally.

In any event, it does seem to be a bit of a conundrum, and I applaud your efforts toward solution at the state level. I'll publish your letter in the hopes that our readers can respond directly. If you do run across an interesting proposal, please share.

Jack Rickard

Hi Jack!

I love your magazine, but I've heard enough about that cigarette company, your smoking habits and that guys hat.

Let's get back to computer bulletin boards and stop wasting space with a topic that has nothing to do with telecommunications. I'll sure I'm not alone when I say that I don't give a rip about your habits any more than you do about mine.

What would I like to hear about instead?

Should I start using RIP now or wait for the next generation? I would like my users to see a nice GUI but I've read that I won't be able to see what they are seeing. Sometimes I discover my mistakes while watching a user navigate through my system. I need to see what they are seeing.

Why is FidoNet such a dog to figure out? I want to add Fido to my single line Wildcat system, but it's been a nightmare dealing with FrontDoor, WildMail, and a host of other smaller

files. It was easier to learn Morse Code and get my general class Ham license, (N0KBI) than it is to get my questions answered about FidoNet.

I want to know if there are BBS CD ROM disks filled with MAC, DOS & Windows shareware (not just DOS & Windows) that I can offer my callers? In fact I would like to know who has the best disks?

What are the ten best ways to get and keep users? And what BBS services or information are users willing to pay for?

How many types of news or magazine services supply online text information to BBS's & how much do they cost?

In my personal opinion one of the best areas in Boardwatch is it's Letters section. I'd love it if it were twice as large as it is, but only if it were filled with telecommunications related topics.

By the way, my wife and I just got back from a weekend in Redwing, Minnesota. We stayed at the historic St. James Hotel. Would you believe that in the bookstore of that beautiful old hotel, in that sleepy little town, about 50 miles southeast of the Twin Cities, Boardwatch was the only computer related magazine?

My mouth fell open.

Keep up the good work.

TonyC

cheapscans@delphi.com (Internet)
n0kbi@wb0gdb.mn.usa (Packet)
Data Gallery BBS **612-431-1373**

p.s. Happy Holidays

Tony:

Close your mouth.

Technically, you make a persuasive case, but then go on to refute it. If your favorite part is the letters section, and actually it is RARELY technically oriented, then why would you want to change it?

Philosophically, the rule at Boardwatch is that we will not be restricted regarding subject matter or discussion solely on the basis of our thematic mission. What this means in the raw is that it is ok to talk about Jim's Hat if we, or our readers, want to. And we won't bail on it just because we are a computer magazine. But your view is not only legitimate, it's probably predominant. A computer magazine ought to probably be about computers. We're not exactly, but I understand the sentiment.

Should you start using RIP now? Well, you should if you want to. And if you find it not of value, you shouldn't. That's pretty simple. There is a core group of people running bulletin boards we actually refer to as the "planes, trains, boats, and automobile" crowd. They have fairly well defined reasons why they just HAVE to have photo-realistic graphic images online yesterday, at any price, because they have a great idea of how to sell xxxxx (either planes, trains, boats, or automobiles - although sometimes real estate etc.) online.

For the rest of us, graphics is the new adventure. The higher speed modems make it a matter that can finally be discussed. I guess it is the "multi-media" aspect of the online community in real terms. But I think it will take more than RIP, and will take longer to get there. The hope is that a graphic interface will make online services easier to use. So far, they've actually confused matters I fear.

Why is Fidonet such a dog to figure out? You could probably write a book about that. The official party line is that it was developed by a number of individuals over a span of time piecemeal, that this "modular" architecture is actually an advantage of some sort, and that it "evolved" into such a mess. I guess I believe it is the way it is because the players want it to be that way, and as such comprises a kind of rite of initiation for sysops. If you can configure and install it, you can not only have your BBS on the Fidonet, but you earn the right to bitch about it all more or less endlessly and via this global network, widely. And if you can't, you can't. I suspect if all you had to do was plug it in, there wouldn't have ever been more than 25 bulletin boards on it, and it probably wouldn't have survived to this day.

There are indeed CD-ROMS filled with more files for DOS, MAC, and Windows than you can shake a modem at. I see them everywhere, so I'm not sure what the question is. We're seeing bulletin boards with as many as THIRTY CD-ROM drives online - essentially 18 gigabytes of stuff. Several vendors actually sell collections by subscription, where you get an updated version of the same collection quarterly, and "updating your files" consists of sliding out the old one and inserting the new disc.

What are the ten best ways to get and keep bulletin board users? The first eight of them are to run an excellent bulletin board system. The other two have to do with letting the world know you run an excellent bulletin board system.

What bulletin board information or services are they willing to pay for? It varies pretty widely, but follows pretty closely to what they want to do.

1. Download software files. This is insatiable and not even entirely rational. But the urge to acquire the maximum megabytes per fortnight by modem appears to be real.

2. Mail. Converse, hobnob, abuse, disabuse, and generally correspond with other like minded correspondents via electronic mail forums variously known as echomail conferences, news groups, forums, conferences, or areas.

3. Chat. I don't really understand this one. But there is an apparently insatiable appetite for typing "hi bob, bye bob, hello sally, bye sally, love and kisses," and "bye all" in real time on largish multiline boards. This has become so popular on the west coast that you can make a fortune running a BBS while working half-days falling-down drunk.

4. Internet Access. This is pretty simple. Some 15 million BBS callers have heard the term Internet and they want to play. They don't want to learn UNIX exactly, and the $15-$25 per month access fees on typical UNIX host providers is not acceptable. They want their BBS operator to do it for them. And they will.

There is a lot of talk about "access to information" regarding both the Internet and bulletin boards. It's a little wee bit of a lie I guess. There is information there, but it is a byproduct of the two

main quests - access to free software and the desire to communicate with each other in the night. All else is peripheral to those two basic drives, and increasingly the second overshadows even the first.

Very pleased to hear we've made the grade at the St. James Hotel.

Jack Rickard

Dear Jack,

Good article on the new Hayes OPTIMA 288, but it didn't touch at all on connecting it to a Macintosh.

As one of the Macintosh based Hayes beta test sites during OPTIMA 288 testing and a Boardwatch subscriber, I'd like to share some info for Boardwatch readers who use the Mac... there are a few of us, I think.;-)

Utilizing the OPTIMA 288 with the Mac is best accomplished with the help of a Creative Solutions Inc., Hurdler HDS serial port NuBus card with a special ROM and software, or the soon to be announced Hustler/HDS+ high-speed serial port NuBus card, which CSI will show at the San Francisco Macworld Expo in January. Since the Mac can't be programmed to support a DTE speed greater than 57.6kbps, the CSI Hurdler/Hustler NuBus card, with it's large input/output buffers is the only way to go. The present HDS card will support a 115.2k bps DTE with a special Extension written by Ward McFarland of CSI and the new card supports a 230.4k bps DTE. We are presently testing the new cards.

As you found with the OPTIMA 288 using a 115.2k bps DTE on your PC, non-compressed files transfer at a rate of 2880 up to 10,500 cps for highly compressible TIFF type files on a fast Mac. With a 230.4k bps DTE, these same TIFF files transfer at 20,600 cps, or over 1.2 Mb per minute. Application documents (Excel, QuarkXpress, MS Word, etc.) transfer at rates of 4800 to 10,000 cps, depending on the file's structure, of course.

As your article pointed out, ("why would these uncompressed data rates be important?") involving the OPTIMA 288 with a GUI BBS interface (we use TeleFinder[tm] Group Edition Host) makes a major difference in the speed of the GUI to the user also equipped with an OPTIMA 288. With TeleFinder[tm], the response time as you work with the desktop metaphor is equivalent to the speed you get via a LocalTalk connection. Not only is it impressive, it is certainly more productive, to say the least. Additionally, our Mac business users are not very involved with file compression (StuffIt, Compact Pro, etc.) and simply want to get their file from point A to point B, without involving some other additional file processing steps. Since the OPTIMA 288 offers considerable speed improvement, sending an uncompressed file is now a very quick process and our business user may actually spend less time with the process, than they might if they involved file compression and decompression steps.

A few comments about using the OPTIMA 288 at 115.2/230.4k bps.

We've noticed that some Macs with slow hard disk drives will experience ZMODEM file retransmissions, as it appears the hard disk drive simply can't respond fast enough and/or something else running on the Mac at the same time can create problems. Even CSI has seen this on their own Mac IIfx, which is equipped with an older, slow hard drive. This is also a problem if you have LocalTalk turned on and even a small amount of work is going on. A Quadra 700 class Mac (or better) with a fast hard drive and Ethernet active, doesn't have a problem keeping up.

As you also pointed out, some software will have to be revised and this is true on the Mac side too. The popular ZTerm v0.90 can't get above about 8500 cps, no matter what horsepower Mac you run it on. We'd also like to see TeleFinder revised to read and write more blocks of data per disk access cycle during a ZMODEM transfer, since disk activity is pretty rapid when dealing with smaller 1024 byte blocks. Smartcom II for the Mac has a better idea, as it appears to write to an internal buffer, rather than constantly hit the hard drive.

At the 230.4k bps DTE speed, the present OPTIMA 288 units need to have "S37=15" involved when originating a call, as they hang-up immediately when calling another OPTIMA 288 and don't start the negotiation process. Hayes knows about this.

Lastly, a clean telephone line is an absolute must, for reliable 28.8k connects. We've had no problems connecting with Hayes in Norcross, Georgia and another firm in Los Angeles at 28.8k bps, but a firm we work with in Connecticut hasn't had the same luck, even with "conditioned" lines. Users may have to have their local telephone company sweep their lines between their central office and their connection. This doesn't cost anything and will quickly point out anything that isn't right. We had an imbalance on one line which never bothered our OPTIMA 144 unit, but sure raised havoc with the OPTIMA 288.

The OPTIMA 288 certainly represents another major step in modem technology and with V.32bis compatibility, it certainly is less painful then the days of the early Hayes V-series or USR HST, when none of us with different brand 9600 bps modems could talk to each other above 2400 bps, in spite of the big bucks we paid for 9600 bps.

The OPTIMA 288 is a "Screamer", but your readers shouldn't forget that these modems expect some horsepower behind them and clean telephone lines ahead of them, if they expect to obtain the full potential the OPTIMA 288 has to offer.

Lastly, the OPTIMA 288 is a viable alternative for those of us who haven't yet been able to obtain, or even get information on the availability of the elusive "ISDN", even though our requests span years trying to get such information! I guess being 50 miles from the nations capital is just too far for our RBOC to deal with.;-)

Sincerely,

Rod Paine
72017.117@compuserve.com
President
ASTEC Company
Purcellville, VA

Background -

The ASTEC Customer Support BBS was reviewed in the May 1992 issue of Boardwatch magazine, page 44. The ASTEC BBS continues its use of TeleFinder to support its Macintosh business users in rural Virginia and other locations around the World.

Since 1992, the ASTEC BBS has been upgraded to a dedicated Quadra 700 equipped with a DayStar FastCache Quadra 128k, two MicroNet Maxtor 540 Mb drives, AppleCD 300 units and CSI Hustler/HDS+ serial port cards connected to Hayes OPTIMA 288 modems. The ASTEC BBS is a private, subscription based customer support BBS, available to ASTEC customers, other TeleFinder BBS Sysop's and organizations providing Macintosh customer support services. The BBS is not available to the general public.

Rod:

Very pleased to receive your report and you raise some particularly pertinent points. I guess the two most striking are that all callers do not receive full 28.8 kbps connections all the time, and this is a significant enough jump to put a strain on existing software. I tried to make these points in the article, but being a very new convert to the concept that you can really do 28.8 kbps at all, I may have not placed enough emphasis on these.

We do get 28.8 kbps connections. We get them often enough that it is classified here as a "real" thing. However, they are nowhere near as common as 14.4 kbps connections with V.32bis modems were/are. If you expect the same reliability as to making the top connection, you will be disappointed. But somehow it doesn't feel disappointed. We often step back to the 24 kbps range or 21 kbps and that still feels pretty good.

I guess I don't quite believe the math behind the disk drive access being a problem. A few too many layers of operating software might be, but I think most of the problems posed by these speeds are software problems, not hardware problems (other than UARTs) - on any platform

Again, thanks for a very informative report.

Jack Rickard

Jack:

The file fetch and finding someone articles were great.

One problem I've found is that most mailers and Compuserve mail will not let you leave the Subject line blank. What do you recommend ?

Thanks

Eric Neifeld
redhawk@eoes.chi.il.us
The ByteHead BBS
Edgewood, MD.
410.538.4810

Eric:

I don't think it's terribly critical. Usually, they will ask that you leave the subject line blank because correspondents are prone to repeat the keyword instruction in the subject field. If found there, the software thinks that is where the actual command is and gets a little bit "lost." In most cases, you can put ANYTHING there and it will work as long as it is NOT the command you are supposed to be putting in the message body.

If your service allows you to put a couple of characters in the subject field, a couple of xx's for example. That should cover it.

In our finding someone article, that is not likely the problem. Somewhere along the line, someone corrected my grammar a bit - a not inconsiderable faux pas when writing about computers. So basically what we told you to do won't work. ADDRESS should be ADDRESSES - plural. To recap, to lookup an address from the Usenet address database, send e-mail to mail-server@rtfm.mit.edu. In the body of the letter enter a search in the form:

send usenet-addresses/rickard

Replace rickard with whatever name you might want to enter.
And put whatever you like in subject so long as it does not resemble a command.

Sorry for the inaccuracy.

Jack Rickard

Hello,

I've picked up my first issue of Boardwatch Magazine (Dec 93) and I find it to be quite useful. In particular I wanted to read the review of the new Hayes modem. It was very informative and exactly what I wanted to see, thank you.

I have read a few places about the RIP standard for graphics and am curious as to where I might find documentation on it. An FTP site, e-mail or BBS would be fine. I've enjoyed using BBSs since I was a wee little one using a Commodore PET. I even ran one for a while on a PC using RBBS. These days I do a lot of UNIX type work and wonder why RIP exists when there is already Postscript and XWindows. Of course the Postscript one is easy, no one wants to pay Adobe. But X seems to be a good choice and it runs on UNIX which would be perfect for BBS support.

I guess the nature of the beast is that PCs don't typically run UNIX and people just don't want to deal with X servers and clients. The RIP standard sounds like a good solution and I would like to be able to implement clients and servers on various platforms.

Any information you might have on where to get a hold of this standard would be very useful.

William Adams
william_adams@taligent.com

William:

I suppose X would work, but it is uncommon on DOS machines. I think Quarterdeck actually had a version of DESQview titled DESQview/X that supported X Windows, but it landed on the market with a pretty dull thud. I think the perception is that X is largish and complicated=slow. But it's not a bad idea really.

Postscript suffers a similar problem. The Adobe licensing might be the issue, but I rather gather that it is file size we are really avoiding here. Postscript is quite universal, but for modem transmission the number of characters you need to send to do anything is pretty gruesome - efficiency counts pretty heavily if you're paying the long distance rates.

If you want to see an oddly effective RIP implementation on UNIX, you might want to telnet to sosi.com using RIPterm. This is the Spectrum Online Systems board in Colorado Springs, also available by direct dial at (719)576-6853. They are using a new UNIX BBS package titled SENTIENCE that is quite graphical and does use RIP.

As to the RIP standard itself, it originates with a company titled Telegrafix Communications, Inc., 16548 Bolsa Chica #15, Huntington Beach, CA 92649; (714)379-2131 voice; (714)379-2132 fax; (714)379-2133 BBS.

Jack Rickard

Dear Mr. Rickard:

I'm writing to ask your advice on setting up a BBS system to serve the needs of the online community. I know there are already some 50,000 boards in existence, making it difficult for newcomers to succeed. That's why I'm writing to request your help in identifying those areas of online interest that are not being properly served by existing BBSs.

What would be your Ideal set-up, and what types of services and information would you offer. I realize this is an unusual request, but I really don't know where else to turn. Any suggestion(s) will be greatly appreciated.

Thank you for your attention. Looking forward to your reply.

Greg Taylor
kxfp41b@prodigy.com
1710 Valette Dr
Lancaster PA 17602

Dear Greg:

Well here, let me just write it into this reply and then only you and about 70,000 other readers can just go buy a computer and plug it in and make a FORTUNE as the only one working that concept.

Seriously, what you are asking is quite natural, and I haven't the answer. If I did, it wouldn't do you a smidge of good. This is very much like asking me for the idea of a number one selling book you could write. If I knew, and I told you, you don't have it written yet, and much that would make it successful is in the writing of it, not in the idea.

I have seen some miserable ideas actually do pretty well - executed well. I've never seen a great idea make it - executed poorly. So I guess I believe that ideas are not really very valuable. Persistence seems to be immensely so. If I were to start a BBS today, it would be on the topic of bulletin boards and online services. Actually, I guess I did. It's because I'm intensely interested in that topic, and therein might just lie a clue.

The online world is maturing. It's not as easy to start on a shoestring and build a system as it was a year ago. And it wasn't as easy a year ago as it was the year before that. Expectations rise. It takes a lot of work and sweat equity to do it at all, and it always did. You will find that operators of large shareware library systems really like shareware, and enjoy cataloging and filing and collecting software. You'll find that successful operators of bulletin boards specializing in games and game software really like to play computer games. Chat system operators are prone to chat. Operators of sailing bulletin boards tend to like to sail. And so on. Larry Woods, whizop of the CompuServe Graphics Forums, loves graphics and loves to talk graphics and will do so at the drop of a pixel. Surprise.

The reason for all this is that the online world, while still literally screaming with opportunity, is a pretty competitive place. It weeds out the half-hearted attempt quite entirely, the faintly interested soon become the disconnected number, and the quick buck artists usually move on to greener multi-level pastures pretty quickly.

So the question really isn't what idea would work online. Any of them will. The question is what topic or field are you so totally interested in and absorbed by, that you'd be willing to slave in the online onion field with literally every spare moment of your free time for the next three years in order to bring it online? That's what it will take.

Jack Rickard

Dear Jack,

I just finished reading your reply to Dave Holohan and his quest through out LA to find the latest issue of Boardwatch. Having been a reader for quite awhile, perhaps I can give you some insight into the "subscription syndrom."

I read several periodicals and until lately I never subscribed to them. Why? Well, I like reading a magazine on my own terms. Today I was in my Boardwatch mood, so I ran out to my favorite provider of magazines and panicked when I found them out of Boardwatch this early in the month! Lucky for me they did have a copy saved for me (I am the person that "made" them start bringing it in) I guess it is like finding a gem every month to me.

As I get busier and busier (This month I put in a Hayes 28.8 and an Internet Gateway <whew!>) I think I am going to try this subscription thing. All I hope is I get my issue before I see it on the newstand!

Keep on writing! I am dialing the phone right now: Voice to Boardwatch to place a subscription, data to fire this off my new Internet Gateway.

Fancy sig goes here <g>

Ted Sanft
Ted.Sanft@mmbbs.mn.org
Magical Mystery BBS
612.552.0311
West Saint Paul, MN

Ted:

On review, I may have sounded a bit more harsh than intended in responding to Mr. Holohan's letter. Different individuals have different personal habits. I myself love browsing Tattered Cover, Barnes and Noble, or the local Software Etc. - mainly for books but occasionally I pick up a periodical as well if I haven't seen it before. My point was that if it was something I was looking for every month, and was actually down to canvassing stores to see if they had it, I myself would drop a subscription card and be done with it. But I probably DO subscribe to about 60 such publications already, so that would make sense. It doesn't mean it's the only way to live. We're frankly very pleased to have developed that kind of following, but no

magazine can be that important to anyone. I doubt I would go through all that to get a copy of Boardwatch, even though I edit it.

You should certainly read the magazine on your own terms, and whether by subscription, off the newsstand, or electronically, we are indeed privileged even to have your attention for a few minutes each month.

Jack Rickard

Dear Jack:

I am an avid fan of your magazine. I was pleased that December's issue featured the Hayes Optima V.FC 28800 modem, which I'll soon be putting online as the third node of my BBS. You always provide a wealth of info about the online community. Though I was already aware of and had planned to buy the Hayes before I read the issue, it did give a great deal more information about this modem than I had gleaned from anywhere previously. Not only that, but another article detailed the ESP board I intend to buy!

The reason I'm writing is that I was wondering what your criteria are for the National List of Electronic Bulletin Boards and On-Line Information Services listed in the back. Most of the systems appear to be major, but the relatively small boards such as mine could use a plug as well. While I don't dare suggest you list ones that have been up all of 3 months, or operate on XT's ;) I would very much like to promote my own, which has been in operation for nearly a year and is considered by many in this area as "the" gay/lesbian BBS to call. At the moment, we have about 170 users, 5 echomail networks, and almost 1.3 gigs of storage, including a CD-ROM with all 800x600 .GIFs. In the near future, we plan to add even more 28800 modems, Internet access, and who knows what else.

The g Force BBS can currently be reached at speeds of up to 14400, 23 hours a day (accounting for zone mail hour, of course) at 810/852-BLUE. Callers must be 18 or older, and at present there is no fee. As can be expected from any responsible system, callers wishing access to adult materials must first provide proof of age.

If possible via e-mail, I would also like any information you have about advertising in your magazine. My system is already listed in several BBS lists, but may benefit even more from a display ad (which incidentally I'm considering for a local gay publication as well).

One side note... in your List of BBS Keepers, you list Eric Blair of S-TEK BBS as compiling a Gay/Lesbian BBS List. While this may still be true, to my knowledge he WAS a "contact" for Billy Kennedy of Risqilly BBS for his Gay & Lesbian BBS List, which is quite complete and gives information for hundreds of these systems in the US and around the world. I was under the impression that this is no longer the case, but I will ask Billy and write you again when I find out.

Thanks for a great magazine, and keep up the good work!

Jeff L Bonner
<jbonner@world.std.com>

Jeff:

We have no criteria for the National Select list at all. I'm constantly amazed at the reflexive accusation that it is "just for big bulletin boards" and that we ignore the little guy. I understand that would be the normal way of doing it, but it has never been the case simply because it's never been the case. If any of the many people who complain about this would bother to look at the list in any detail, we have many tiny little single line systems on it, others that are three or four lines at most, and they are not token, but actually comprise a substantial portion of the list.

We do get a lot of requests to be "on" this list. It probably doesn't even make any sense to HAVE this list at this point. It is a historical remainder from an earlier Boardwatch, but one I'm inclined to retain. It is a list of bulletin boards I want to list. You don't apply to be on it, there is no fee, application, or other avenue to it at all. Advertising in Boardwatch doesn't get you on it. They are not necessarily the best, the biggest, the most exclusive, the most popular, or anything else of note. These are just systems I want to be able to find the phone number for, and the easiest way for that to be true is to publish the list each month in the magazine. I do tend to be a sucker for the special topic type systems that list some kind of oddity or specialty such as African studies, beekeeping, oragami, or whatever. The finest gay BBS in the world probably wouldn't make it even at 1000 lines. The best gay ornithologist's BBS probably would, and the line count wouldn't make a whit one way or another, nor would I probably know. I just don't want to lose the number because you never know when an emergency might arise and you NEED a gay ornithologist.

Jack Rickard

Hello Jack,

Couple things! One, is it normal for standard subscriptions to arrive (December Boardwatch) on the 18th to 25th of that month? I understand by TEMPORARILY living in Hawaii, things will take longer, but I have not encountered any of my other pubs, not arriving one to two days before that months, month issue. Unfortunately for me, Boardwatch is my most awaited pub. Got December today and it is December 18th. Thought due to Holidays I would not see it until January, however this is the earliest in the month I have ever received one.

Secondly, I must say Jack, your arrogance is refreshing, as I too can be accused of same. However, where do you get off telling that fellow that could not find your magazine "You must be jerking me off". You control the pub, it is yours and you should be proud, but why be so rude to people. Not unlike a SYSOP, you must realize, that to YOU, they feel a ONE ON ONE situation, but as YOU AND ALL SYSOPS understand, it is more like 1:800 ratios. I think you have mentioned before about reading and re-reading and writing and then going back later to re-read and re-write your response and that one will USUALLY change things. Take your own advice JackOFF <g>, and maybe you will lighten up.

Reading Boardwatch and understanding your wit is not unlike fine wine, one must injest a lot to fully appreciate it. I have, but many new, to include 'MAU with initial issues, find themselves very offended, and somewhat intimidated. PERSONALLY, I find it funny and somewhat amusing that there are at least two of us out there. Just that one of us can voice it on a more AUDIENCE FILLED platform. I

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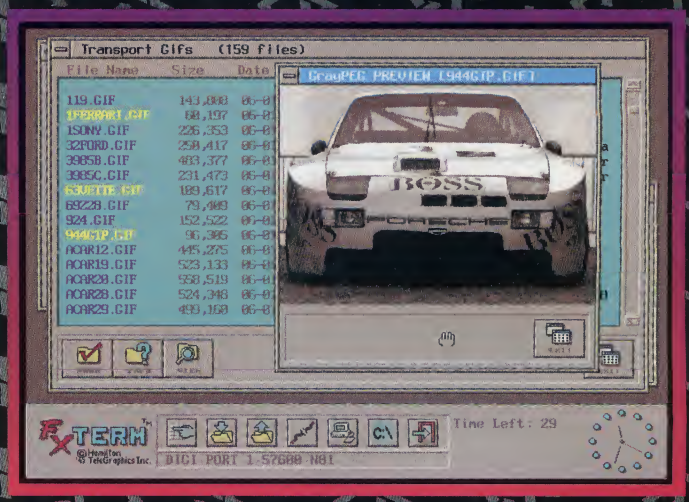

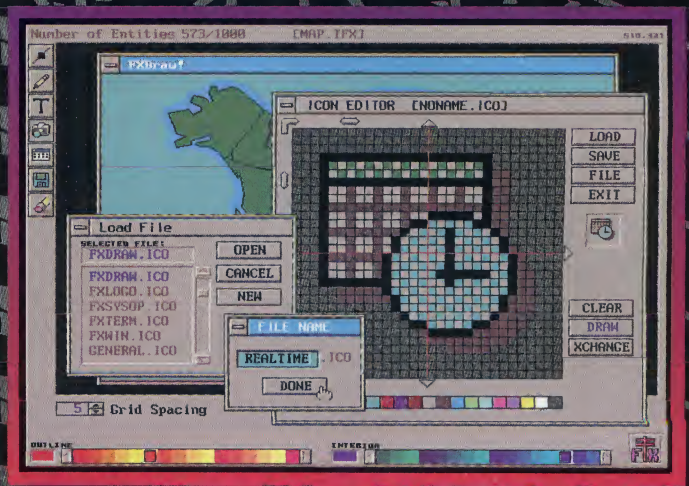

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know I will get blasted one way or the other on this, as you ALWAYS get the last PUBLISHED word!

Keep it up Bro, your doing it!

Scott M. Gray
The Computer Shanty
scott.gray@cld9.com

P.S. Thanks to your Magazine and Brent Davis' hard work, we do and now have been recognized for our "Family of BBS'" in Hawaii and mainly those on Oahu. Thanks for the offer and the plug. I wish it would have been like the support BBS' though where it showed our features. In my little case: 6-Lines - Internet/NEWSGps - 18 CD ROMS - YankeeNET - WildNet - and to the acclaim of door programmer's 65 REGISTERED Games. Then again, if MUSTANG would pay half the bill like the others, more of us would advertise. Just cannot see paying $25 for what PCB/Major assist their sysops for $12.50. Hell, I could switch software just in the money I would save in a year (Hmmmmmm, Jim H, you reading...might be an Idea!)

Dear Scott:

Well, we seem to have two basic items here. The 18th of December does sound a little late. I have to confess, we slip a couple of days per month around here and no matter what I do, it seems to take about 32 days to do a Boardwatch. As a result, we are losing a bit of ground against a somewhat merciless calendar. We are still in the postal service prior to the first of the month, and if it took 18 days, we have a delivery problem to your location that goes quite beyond our publishing schedule.

That said, the early date of your other publications is quite illusory. I received the February 8th edition of PC Magazine on January 12th - very timely. I suppose I could slip a month on the cover date and then you would at least receive your December issue on November 18th. But it would be the same issue with the same pages and a different cover date. We may actually have to do that before this year is up.

The fact is, from when we are writing most of it until we are in your mailbox is typically less than 30 days, and there virtually aren't any other monthly magazines in any field with that short a turn around. It keeps us always on the edge of disaster, but the online world we cover is somewhat uninterested in historical footage and so we rather live perched on that precarious edge.

As to my comments regarding Mr. Holohan's predicament, they were meant entirely in a humorous vein. I certainly hope he took no offense at them (rather doubt that he did actually), and really did not intend any rudeness. Understand that there are some subtleties to Boardwatch that not just everyone reading it is going to "get" the first read through. We could, I suppose, re-aim it to the least common denominator reader in an effort to be understood. Or we can have a bit of fun with it and let those who can read, read. I rather choose the latter. If we develop a subset of cattlebrains perennially of the offended class, I can probably live with that.

At the heart of it, many of our readers have literally been with us for years and have watched us grow from a ragged, irreverent little newsletter into what LOOKS a little bit like a magazine. These people are my friends and coconspirators in remaking a world in electronic form. Unlike many publications, our readers aren't the "marks" in a publishing empire. They are generally very smart, very involved in the process, and we're not likely to "get away with much." They also have a pretty low tolerance for the boring and the marketing schlock pretty much ubiquitous all around. As a result, we are pretty much as we are, and actually struggling to keep it that way under some pretty considerable pressure to take on a "Ziff" look.

It is a bit simplistic to pass it off as simple arrogance, but if pressed, I'll often own up to that rather than offer a class on what's really going on to the intellectually bereaved.

Stay with us Mr. Gray, and we'll try to first do no harm...

Jack Rickard

Mr. Rickard:

How would I go about finding a list of BBSs that cater to the farming community or that have a Farming SIG? Appreciate any advice you can give me.

Thanks,
BOB CANNON
rrcannon@aol.com

Bob:

The pond's a little dry here I fear. We'll take a letter and hope some of our Future Farmers of America Online respond in kind.

Jack Rickard

Dear Editor,

This letter is to serve as a test of a new "Letters to the Editor" feature on Cyberia, as well as a request for verification from your end. Cyberia is an online general information and entertainment system located in York, Pennsylvania. We have always strived to make things as simple as possible for our users, and with our new Internet e-mail and newsgroup connection we are attempting the same. Our "Letters to the Editor" section is a menu online, where our users can easily hit or click on the magazine of their choice, and an internet message is automatically addressed to the corresponding magazine's editor. In my initial research I was able to find 38 magazine editors with internet mail addresses, and that is why you are receiving this test message.

We would really appreciate it if you could please verify that this is the correct Internet address where you would like to receive mail from our users. If you are paying to receive these messages and would prefer to set up an account on Cyberia to receive mail, we will allow you to set up a free account for your magazine to send and receive internet mail. With our internet alias program, you can have the address (**yourmagazine@cyberia.com**).

If you know of any other magazines that might benefit from having the ability to send and receive internet e-mail, please let us know, and let them know about our service.

Sincerely,
Adam J. Viener
adam.viener@cyberia.com
Cyberia Communications, Inc.
717-840-1444 - Cyberia
717-840-0139 - Voice Support

Adam:

Sorry, your e-mail test didn't make it through. Like John C. says, a lot of it gets lost. But we are doing some parapsychology experiments involving undelivered electronic mail and so I'll take a wag at a reply anyway.

I'm sensing a Letters to the Editor menu item. Neat idea. Most magazine editors don't get enough electronic mail as it is, and I think they'll leap at the concept. I get a pretty clear picture of them huddled in misery, pining away while waiting for more mail. Yeah, this should be a winner.

You might advance the concept a little bit. Who needs callers? You could have the computer actually GENERATE random letters to the various magazine editors and mail them out - several hundred per minute.

Another glimpse. Something about a rabbit. Maybe a naked rabbit. Playboy@class.com comes to mind for some reason.

Jack Rickard

Editor:

I just finished reading the December issue of BoardWatch. It was one of the most worthwhile reads I have had in a long time. As a Sysop of two BBSs and about to open up a third, I am very interested in what is available for BBS software. Do you ever run comparative reviews or do they tend to be single articles such as the one on RoboBOARD/FX?

I am interested in setting up a BBS that will allow Internet connections. I can hardwire this system to a mainframe that is an Internet node. There is no problem in doing this. The question is, is there any BBS software that will allow users a throughput to Internet?

Keep up the good work. You are about to get a new subscriber.

Lowell Herr
herr@catseq.catlin.edu
Project PHYSLab
The Catlin Gabel School
Portland, OR 97225

Lowell:

Glad to hear we're hitting the mark in Portland. I too am very interested in what is available in BBS software. I've never figured out a comprehensive way to do comparative BBS software reviews, and so we don't do them. BBS software varies quite widely based on the application for which it is intended. To run a BBS isn't really an application - it's an umbrella covering a multitude of barely related sins. We've always wanted to do such a thing, but we've never figured out a methodology that would work satisfactorily, and so we'll pass despite the obvious newsstand sellout it would create for us. A recent effort to just try to gather some very basic information and contact data on the major players has reinforced my position on this. So we do tend toward single articles like the one on RoboBOARD/FX.

Your specific application is a case in point. I think the hottest area in BBS software development today revolves entirely around making the Internet connection. There are more "secret" crash programs to do this right now than anything else in BBSland, and probably more than everything else in BBS software development put together. I don't know of a BBS software package that DOESN'T provide basic e-mail service and can't think of one that hasn't at least got a more or less secret "demo" version to handle ftp/telnet/smtp/nntp in the lab. Within the year, you should be able to put up a pretty capable Internet site providing ftp and telnet service both to the Internet, and to dialup callers, for less than $5000 and offering some features not seen on the Internet previously. The days of the $30,000 UNIX installation with full time UNIX sysadmin on the payroll as the only option in setting up a presence on the Internet are not long for this world.

I would expect the big "rollout" to be at ONE BBSCON in Atlanta August 17-21st, if that gives you any kind of availability time frame. Anything I can assemble and print as to the current capabilities is out of date by the time I finish it, and you wouldn't read it until a month later, by which time it would be a joke. I can tell you that we have a very experimental site up and running (telnet boardwatch.com or ftp boardwatch.com) whose key component, aside from our existing BBS, is an old 386-16SX computer that doesn't even have a hard disk drive in it or a monitor and could probably be valued at about $400. Viable solutions will undoubtedly cost more than that, and probably won't be available until later in the year, but I'm not guessing about their imminent appearance.

Jack Rickard

Dear Jack:

First off, the lead-in kudos...Compliments on a terrific magazine. It is by far the standard publication for the serious sysop. But you already knew that!

Now for the request... Have you considered regular articles or a regular section devoted to the technical aspects of online gaming from the sysop's perspective? Yes, I am aware that there are already "electronic" gaming magazines ad naseum, available on the newssstand, but none (that I'm aware of) that is directed to the sysop and their interests.

While I currently do not, I would like to offer some quality single and multiplayer games on my BBS. I wish to avoid however, the trial and error method of this aspect of BBS operating. This time at least! Hey...there's an idea. A gaming magazine directed at the sysop. Run with it Jack! In the mean time, keep up the fantastic work.

Sincerely, Brian Beck
bbeck@infonation.com
InfoNATION **(810) 749-6498**

Dear Brian:

We'll take a look at it. I know we cover this a hit and a lick as games come out that catch our fancy, but a full treatment of it would certainly not be out of line. A small but avid group online does do the game thing pretty hard.

That said, the trial and error method has gotten some bad, and I think undeserved press. The most striking instance I think was of a BBS down in Texas that sported 150 games online. It was really rather famous in those days as a gaming center.

The sysop had a brain freeze one afternoon after noticing that virtually all the real activity centered around just a couple of the most popular online games. In a frenzy of efficiency, he decided that

if they really were only interested in the top three titles, he would just remove all the deadwood and let them concentrate on the ones they really wanted to play. So he deleted all his setup and installation work on 147 games.

And all his callers went away. You see, he was the gaming BBS, and everyone knew this because he had a 150 games online. When he had only three, it couldn't really be taken seriously now could it. Facing all the work of reinstalling all those games to get back his callers, he just folded the board instead.

The moral is, don't look at that user activity log too hard. It can really get you into trouble.

Jack Rickard

Subject: InfoGlut's Newest Bottleneck

Jack -

You mentioned the congestion of UUCP host providers in the December issue. I couldn't agree more.

As many of your readers are (I hope) aware, I've been working closely with Galacticomm and Mustang on their Internet gateways, providing the actual protocol transfer module for both. One of the first and largest bugs we started getting back from beta testers was the incredibly long time that it took to establish a protocol startup, and complaints that the dialer was timing out too soon! Indeed it was, in some cases giving up after 90 seconds *AFTER* establishing carrier! The suggested timeout, initially, was 60 seconds, and we've had to up that to 120 and even 180 seconds in some cases.

The problem is as obvious as it is solvable: UUCP providers are overselling their facilities. I'm going to refrain from naming names, since I've not given them a chance to answer to these claims, but there are many nationwide commercial providers who are adding points-of-presence in cities all over the country, while not increasing the number of machines to service those POPs. Additionally, they are selling more accounts in those cities than the POPs can reasonably handle from the standpoint of available bandwidth.

Face it, a 56Kb POP is not going to support a metropolitan city. And putting in a T1 connected to an already saturated machine is no answer. Unfortunately for the consumers of these feeds, demand far outshines supply, and overselling in such a market is all too simple. In other words, they are selling too many buckets for the communal well, and it's not only hard to get to, but is drying up.

What is to be done? Good question. Can we expect host providers to self-police this problem. Unfortunately, I don't think so. Perhaps as new services come online, the overloaded ones will begin to lose customers. Perhaps this will all be academic when your local cable company can provide you IP to your house. Perhaps, like me, people will be able to get ISDN and find other points of service. Local users here in San Luis Obispo get free UUCP feeds from my system, but this is simply out of a self-imposed obligation on my part, and will continue only until my machine cannot handle any more feeds without compromising the ones I'm already giving. Short of some radically new service, or an unexpected outbreak of generous individuals, I don't see an end in sight for this problem. And as a provider of the software that is contributing to it, I find myself very concerned. I'd be interested in anyone's ideas on this point.

Christopher J. Ambler
Fubar Systems / UUPlus
San Luis Obispo, CA
chris@toys.fubarsys.com

Chris:

As I mentioned in an earlier issue, I share your concern and don't really see any easy answers. There seems to be a basic lack of understanding in the host provider community of the very critical difference between connectivity and capacity. I've actually alluded to this in earlier editorials - to the rage and consternation of our substantial UNIX-oriented readership. Our local provider literally went non-operational for nearly a month and was marginal for a month after before we changed to another provider. I'm starting to see the same on that one. As you point out, our product support calls for PIMP do seem to revolve around how long PIMP will wait around for the UNIX end to wake up and send something, receive something, or otherwise at least look interested.

But in all fairness, I think the problem IS UUCP and most of the attention in that community has been related to IP connectivity issues for several years. They assumed, understandably enough, that UUCP would go to the dinosaur heap shortly as the entire world woke up to the fact that a couple thousand dollars per month for an IP connection really was quite reasonable. Suddenly, here are 2500 bulletin boards demanding a UUCP connection and offering cash - but in $50 per month denominations. The real terror striker is, I would look for some 12,000 additional bulletin board connections over the course of the next 8 months or so. The problem you note is going to cascade I fear. And as you note, we have several MAJOR host providers that just cannot be described as operational at this point.

Now this would be a good place to mention that there is a whole lot more I know about the UNIX/IP Internet architecture than I quite understand and this is further complicated by the fact that there is a lot about it I just don't know. But at the surface level, I think it is the UUCP part that IS the problem. The routers and either 56 KB or T1 connections provide more capacity than necessary for what we are talking about - bare e-mail and newsgroups - at least for the present. The problem is that UUCP involves spooling mail onto UNIX system hard disk drive surfaces in massive quantities. SMTP mail only hits the drive on the destination end, which varies literally from message to message. And a lot of sysadmins are learning the hard way just what multi-tasking really means when you are actually trying to multitask and anyone cares. I'm guessing the entire problem can be visualized as disk drive heads raking across the platters like a set of spurs.

Solutions? I think it is de-concentrating the flow of mail off those disk platters. We need (you would be a good candidate actually) to develop DOS platform Simple Mail Transfer Protocol (SMTP) and Net News Transfer Protocol (NNTP) servers that can connect to the Internet via IP to deliver mail and to interface in the other direction to existing BBS systems via Novell or LANTastic LAN. We then move all UUCP service off onto the BBS's themselves and let them act as UUCP hosts to each other. These BBS UUCP hosts spool the mail on THEIR drives to the SMTP server, which in turn connects to the network via TCP/IP to deliver each message or newsgroup batch. I think these

host providers are well able to deal with IP connectivity issues and capacity measurement (gulp - I hope), domain name service, MX forwarding tables, and the lightwork needed in any IP connection scenario. They would probably rather deal with these larger-pipe accounts anyway.

This would give those larger BBSs capable of handling this task a new income stream from smaller BBS's connecting to them via UUCP. It would move all the disk raking off the few host providers and out into the BBS community in a much wider fanout. It would give those same host providers a smaller group of more lucrative IP connections to the large BBSs. The big BBSs would basically aggregate the UUCP accounts for the host providers both economically and technically.

This does have a couple of comical side effects. The BBS community has long enjoyed very efficient file transfer protocols such as ZMODEM and others, and very efficient file compression ala PKZIP as well. To move from that to UUCP g protocol, which is still very much akin to wrapping notes around rocks and throwing them through each other's windows, is a pretty strange step backward. But I think it is the route we will wind up taking as strange as it is - at least temporarily.

So basically, I would encourage you to enhance your software for Mustang and Major BBS so it can act as a UUCP server as well as client. And add an SMTP/NNTP server to run on the same LAN and interface to the UUCP software file formats (largely Waffle in the DOS world). I can tell you this is precisely the direction we are going with our own Personal Internet Mail Processor (PIMP) that we developed here at Boardwatch.

And ultimately, bulletin board operators are much more comfortable dealing with each other for connections. If UUCP connections to the Internet were available BBS to BBS, the entire country would be networked in six months and there wouldn't be any BBSs where you couldn't send and receive Internet domain name mail worldwide. Actually, I very much want this to be the case - to the point of returning to the land of Intel assembly language myself to make it happen.

Hang in there. We need you.

Jack Rickard

Dear Jack,

Like the gentleman from South Africa in the December issue, I feel a little odd calling you Jack and not Mr. Rickard. Yet, as your reply stated, we who read you regularly do indeed know you. Thanks !

First let me tell you how much I enjoy the magazine. I think the thing I enjoy most is the fact that I do not completely understand everything that is written in every article. BRAVO TO YOU. Dont get me wrong, this is no self serving epistle to expound how smart I am... Oh no no no.. anyone who knows me will vouch for that. Rather it is kudos to you and your staff for putting out a magazine that challenges us/me to "find out more". On a scale of 1 to 10 my interest in BBSing is a 10 and my knowledge is probably a 2. Your publication fills in a lot of gaps.. and at the same time opens up others...
One other thing, I too have done the monthly "two step" trying to find your magazine. I can always find it... but why do I do this to myself.. when the US Postal Service will deliver.. My subscription will follow.. Just wish there was a way to subscribe online..

Thanks again Jack.. I read all the folks writing in saying "cover this, cover that" I'm just delighted that you cover what you do...

Happy Holidays

Jim Atkinson
spanielman@aol.com

Jim:

I feel just as odd. Mr. Rickard is my father and it always throws me to see people addressing letters to him here. He's not a real computer aficionado actually. But it's probably not too important what you call me.

Very pleased to learn we are hitting the mark. We've been trying to cover what we can cover well, and what we find interesting. Unfortunately, we are losing ground to an online community that is virtually exploding in scope, size, and breadth. I've pretty much thrown in the towel on doing it all myself and we are simply going to find the best writers we can where we can and try to do a better, or at least more comprehensive, job of covering the whole scene - starting with some of these larger commercial services like AOL that are starting to do some very interesting things as well.

Actually, there are several ways to subscribe online. The easiest is of course to dial our BBS at (303)973-4222 and fill out the subscription order online. We do take a few via Internet mail at subscriptions@boardwatch.com as well if you provide a MC/Visa number, card expiration date, and your mailing address. Always have for that matter, but a lot of our readers like to call voice and chat a bit in the process.

Jack Rickard

Hi Jack -

I just finished the 12/93 issue of the magazine - & wanted to say how helpful and interesting it was. I'm new to BBS/Online everything - and read a lot that's helping my inner fog to lift. Specially appreciated the list of U.S. BBSs, and the Internet section. One request: how 'bout a box or page glossary on the terms you use in the text ? They're abc to you, sanskrit to me (eg ftp / UUCP / UART / etc. I assume someone's already compiled a file on this somewhere. Can you point me at same? Bottom line: NICE job on the magazine: Thanks again. PS - specially like the artwork and layout. Have an excellent '94 !

Pete Gerlach
Pilgrim27@aol.com

Dear Pete:

Not an entirely out of the way idea actually. We've published glossaries in the past, but I guess it has been quite awhile now. With the number of new readers, it makes sense. Let me look at it.

Jack Rickard

Dear Jack Rickard,

I love reading your magazine. As a SysOp of a BBS I find Boardwatch Magazine very informative to our

SysOp community. You cover a wide range of topics from hardware to software which is where I bring up my main point.... RoboBOARD/FX.

On the cover of December's issue you showed the RoboBOARD/FX Online Graphical BBS system. Isn't it great! I have been using RoboBOARD since version 1.02 of the older EGA/VGA system. Currently I am a Beta site for the RoboBOARD/FX system. There are new features that I would like to mention to all your readers that will be released in the new year as an upgrade.

The JAM message base is now the format for the message base files. This allows lightning fast searching, indexing and listing of all messages in a designated message board. Also, many, many more message boards can be allowed now thanks to the JAM standard. The older Hudson format for the message base allowed 200 areas and a maximum of 16mb message base size. Very limited when you think of the Internet and UseNet newsgropups that are now becoming main stream. The low number of message boards in the 1.00 FX system is a limitation of The Hudson standard though, not RoboBOARD. Also allowable under the new "JAM" format is file attaches to messages. This will be a BIG bonus!

The file manager has changed slightly also. You now see descriptive icons for each file in the listing window. This will allow the SysOp to categorize each of the files on his system to allow the user to "VISUALLY" see what type of file it is (keeping in the GUI spirit!).

File descriptions are now very lengthy compared with the one line that was allowable before. This will allow those CD-ROM systems to have the full description associated with the file shown. Another big bonus!

As always, keep up the good work at Boardwatch, and have yourself a very good year in 1994!

Kieron Quigley
java@traider.ersys.edmonton.ab.ca

Dear Kieron:

Sounds like RoboBOARD/FX is gaining legs. Thanks for the update.

Jack Rickard

Dear Jack,

Just a brief note to wish you season's greetings and to thank you for the great magazine that you put together. I've enjoyed a subscription to Boardwatch for numerous years now. Each month, I eagerly await its arrival in my mailbox. Along these lines, I think that I can perhaps provide one of the missing pieces to the puzzle (Re: Letters to the Editor in December) of why some folks would rather do the big monthly easter egg hunt for Boardwatch at the newstands than enjoy the convenience and cost savings of a subscription. In fact, I'm toying with the notion myself. Why? For some reason, my copy of Boardwatch seems to arrive — more often than not — with its cover mangled.

Mind you, the rest of the magazine is fine. Since I tend to collect your magazine (I have all issues since I first discovered you), I want the addition to my collection to be in as good of shape as possible. Buying from the newsstand would let me get this. Hmmm, the newsstands here in central Virginia put Boardwatch on their shelves at least a week before my copy arrives in the mail. Another plus for doing the monthly hunt. ;-)

Yeah, I know that the contents of Boardwatch are time sensitive. What you write about this month will be out of date by the next month's issue — if not before. This is one of the things that is neat about the online world. Perhaps that is why your magazine is one of those that I collect. Looking at back issues of Boardwatch is like looking at Byte magazine from the early days.

Regards,
Charles Lee
clee@netcom.com

Dear Charles:

That makes sense to me actually. We'll look at some options to protect the cover. As to it appearing on the newsstand before you get a copy, I'll look at it, but it shouldn't be so. The mailed copies go out at the same time (literally the same day) as the retail copies - which go through several distribution centers before arriving at the stores. I suppose the U.S. Postal Service gets a little busy around Christmas, but it still shouldn't require this kind of time. We'll look into it.

Jack Rickard

Dear Mr.Rickard,

In reading the December issue of your fine magazine, I came across a letter from a fellow Toronto Ont. sysop, Dan Williams. I wish to dispel one of the 'myths' he tried to dump on you as a sarcastic complaint.

I was fortunate enough to pick up my first issue of "Boardwatch" last month in which you featured many bbs's in the 416/905 calling area(here in Metro Toronto).To my surprise(pleasantly), I found my bbs listed. I am one of the 'little guys' Dan Williams mentions, running a single lined bbs on a very un known software(Ratsoft for the Atari-ST). Please don't get the impression by one fellow sysop's musings that you have neglected any bbs here in the Toronto area, as we are known here in town to have bbs's come and go in great haste (they drop like flies in no time.....welcome to the Canadian winter you made pleasant jest of).

I agree with many points Dan made though, as CRS seems to be one of the only "PAY" games in town when it comes to bbss, and a rather poor one at that in my opinion (not one I would pay for personally, as I have been on many FREE systems that offer more, and run better than CRS has a hope to and I am darn sure Dan Williams's bbs falls in that category).

Thanks for being such a fine magazine, and one of the true voices for the bbs community, and Dan, Lighten up.

Glen Ketteringham,
Sysop of Monty Python's Flying bbs
416-266-9010,24hrs at 14.4kbaud
glen.ketteringham@ablelink.org

Dear Mr. Ketteringham:

Yeah Dan...lighten up.

Jack Rickard

Modem Watch

BBS Discount Prices

Special Reduced Prices for BBS Operators

VENDOR	MODEL	LIST	SYSOP	BBS	VOICE	FAX
AT&T Paradyne	Dataport 14.4/Fax	$329	$180	813-532-5254	813-530-8276	813-530-2398
ATI Technologies	14400 ETC-E	$219	$149	905-764-9404	905-882-2600	905-882-2620
Cardinal Technologies	9600V42 V.32	$349	$219	717-293-3074	717-293-3000	717-293-3104
Cardinal Technologies	14400V42 V.32bis	$449	$249	717-293-3074	717-293-3000	717-293-3104
Computer Peripherals	Viva 9624e V.32	$349	$249	805-499-9646	805-499-5751	805-498-8306
Digicom Systems	ScoutPlus V.32/Fax	$289	$168	408-262-1412	408-262-1277	408-262-1390
Digicom Systems	MacScoutPlusV.32bis/Fax	$299	$178	408-262-1412	408-262-1277	408-262-1390
Digicom Systems	Connection 96+ V.32bis	$199	$139	408-262-1412	408-262-1277	408-262-1390
Digicom Systems	ScoutPlusTerbo V.32 Terbo/Fax	$329	$198	408-262-1412	408-262-1277	408-262-1390
Galaxy Networks	UFO V.32bis	$999	$299	No BBS	818-998-7851	818-998-1758
GVC Technologies	FM-9696/144V V.32bis	$689	$413	201-579-2380	201-579-3630	201-579-2702
GVC Technologies	SM-96V V.32	$599	$329	201-579-2380	201-579-3630	201-579-2702
Hayes Microcomputer	Optima 288 V.FC + Fax	$579	$288	404-446-6336	404-840-9200	404-449-0087
Hayes Microcomputer	Ultra 144 V.32bis	$999	$249	404-446-6336	404-840-9200	404-449-0087
Hayes Microcomputer	Optima 144+Fax	$519	$179	404-446-6336	404-840-9200	404-449-0087
Hayes Microcomputer	ISDN System Adapter	$1199	$450	404-446-6336	404-840-9200	404-449-0087
Image Communications	Twincomm 9600 V.32	$299	$279	No BBS	201-935-8880	201-935-6548
Intel Corporation	14.4EX V.32bis	$549	$269	503-645-6275	503-629-7000	503-228-9707
Intel Corporation	9600EX V.32	$599	$299	503-645-6275	503-629-7000	503-228-9707
Microcom	DeskPorte FAST	$499	$249	617-255-1125	617-551-1000	617-551-1988
Microcom	TravelPorte FAST	$499	$249	617-255-1125	617-551-1000	617-551-1988
Multi-Tech Systems	MT932BA V.32	$869	$435	612-785-9875	612-785-3500	612-785-9874
Multi-Tech Systems	MT1432BA V.32bis	$899	$450	612-785-9875	612-785-3500	612-785-9874
Practical Peripherals	PM14400FXSA V.32bis	$549	$250	805-496-4445	805-497-4774	805-374-7202
Practical Peripherals	PM14400FXMT V.32bis	$299	$155	805-496-4445	805-497-4774	805-374-7202
Supra Corporation	SupraFax V.32bis	$399	$149	503-967-2444	503-967-2400	503-967-2401
Telebit Corporation	T3000 V.32bis	$949	$399	408-745-3861	408-734-4333	408-734-3333
Telebit Corporation	WorldBlazer	$1049	$429	408-745-3861	408-734-4333	408-734-3333
Telebit Corporation	QBlazer V.32bis	$549	$299	408-745-3861	408-734-4333	408-734-3333
U.S. Robotics	Courier DS V.32 terbo Fax	$1295	$399	708-982-5092	708-982-5010	708-982-0823
U.S. Robotics	Courier V.32 terboFax	$695	$299	708-982-5092	708-982-5010	708-982-0823
Ven-Tel	EC96 V.32	$699	$439	408-922-0988	408-436-7400	408-436-7451
ZyXEL	U-1496 +V.32bis	$749	$499	714-693-0762	714-693-0804	714-693-0705
ZyXEL	U-1496E+V.32bis	$499	$349	714-693-0762	714-693-0804	714-693-0705
ZyXEL	U-1496E V.32bis	$349	$249	714-693-0762	714-693-0804	714-693-0705
Zoom Telephonics	VFX V.32bis/Fax Int	$179	$99	617-423-3733	617-423-1072	617-423-9231
Zoom Telephonics	VFX V.32bis/Fax	$199	$119	617-423-3733	617-423-1072	617-423-9231
Zoom Telephonics	VFX V.32bis/24K/Fax	$269	$119	617-423-3733	617-423-1072	617-423-9231
Zoom Telephonics	VFX V.32bis/28K/Fax	$349	$159	617-423-3733	617-423-1072	617-423-9231

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Rituals and the Computer

by John C. Dvorak

If you go back to school and take cultural anthropology you'll find an interesting notion that could easily be applied to the online world. According to anthropologists, the acquisition of mythology, rites and ceremony gives the culture a way to think about and recognize any new invention. Anything not fully understood is ritualized.

The ritualistic functions are a significant part of our daily lives. Much more a part than normally recognized. In CULTURAL WAYS, by Robert Taylor, he describes the need for ritual as: "Ritual provides a reassurance and feelings of security in the face of the psychological disturbances in everyday life...Ritual may be viewed as providing reassurance in the sense that it is a ready-made solution to problems which may be poorly understood and difficult in solution."

The little rituals that we do every day are hardly thought of as ritualistic. Rituals are thought to be something foreign, something that savages do. Modern, urban, chic man is certain that he doesn't DO rituals. He'd rather not believe that he does. The simple act of listening to the telephone prior to dialing just to be certain a dial tone is present is a ritual. It once had a purpose. When there were party lines, for example, the line wasn't always free. But, now, (out of thousands of calls that you probably have made) how many times has the dial tone not been there? Probably too few a number to continue the ritual.

There are other rituals that are used everyday. Shaking hands, right hands only, is an old tradition to show that no weapons are carried. Many people nod when they greet a friend on the street. The nod is a carryover from the days when men tipped the hats that they wore and women curtsied. The reasons for either have been lost. It is simply a ritual. And of course we have the Asians with their ritual bowing.

With the computer an entire set of rituals have appeared. They may have once had a real purpose. The purpose has mostly been forgotten. The purpose may never have been known. Without an understanding of the how and why that something is done a ritual is created.

Most computer commands were handed down from knowledgeable user to novice. The tendency of the expert is to not explain but simply say, "Do it this way!" Without an explanation or understanding the imagination can go wild. After all, look what happened to Mickey Mouse in "The Sorcerers Apprentice". (In the movie FANTASIA) Mickey thought that he knew the proper incantation. He tried something that he wasn't supposed to do, and he did it wrong. He unleashed a nightmare of brooms and buckets. Can you imagine the fears of a newcomer to the computer? (This must be especially true for those who saw FANTASIA!)

When that novice trains a new novice the emphasis is on doing the incantation EXACTLY right. The ritual is reinforced. The unknown horrible things that could happen (like blowing-up the whole computer system, or something) will be averted if the ritual is followed to the letter. Unforeseeable, horrible, and certainly detrimental things will happen if the mighty computer is not appeased with the proper ritual. Who knows what "the beast" might do, and what havoc will begin.

With the "beast" computer, the practice of simply parroting commands, with no understanding of exactly what the meaning, or how the command works is a ritual. The user must enter the commands in the exact order and way as originally shown. It is a complex magical incantation. Any attempts to show the user a different way, even if it is more efficient, is resisted. The fear of the magic is apparent.

Myths of the evil and frustrating computers were reinforced by naive ritual-rut users. It isn't helped along much by incompetent salesmen.

The magic of computers and the rituals are a daily part of our lives. In the case of the home computer user, a list of the rituals once had validity. But, due to the advancements in technology, no longer do. For example, how often are you told to always take the diskette from the drive? This is because the drive will destroy the diskette when the machine is turned off. While it was true years ago, it never happens anymore. And what about the myth that X-rays damage disks? Or how commands must be entered in upper case, when most software accounts for upper and lower case discrepancies and software that doesn't do this should be rejected.

Unfortunately, once an object and its rituals are accepted any changes are resisted. The early computers had lights which flickered. They were both decorative and they indicated if the machine was at work, or at rest. The lights were an integral part of the communication between the user and the machine. When CRTs and other methods of communication came into use the little flashing lights became useless. However, the culture had come to equate flashing lights to computers. After all, every movie, television show, and sight gag about computers had references to flashing lights. The computer must have lights. The large machines of today have lights flashing so that the computer will be recognized AS a computer. The parallel computer from Thinking Machines has lights all over it for this reason alone!

What this all means, of course, is that there is an underlying resistance to progress. Once something is established with its assuring rituals, it is hard to veer from the set course. Look at cars. Attempts to change the shift lever to push buttons or to move it to a location other than the steering wheel or floor have met with resistance. It won't happen no matter how practical. SO whatever rituals we develop around the desktop computer, we may be stuck with forever.

Having said all this I'm now going to embark upon a collection process. Useless online rituals. The world of online computing is different and new enough that odd rituals are coming along daily. Using the letters IMHO, meaning "in my humble opinion" (as if anyone gives a rats ass) for example is a screwball and useless ritual. If someone is expressing an opinion it's usually obvious. Why be redundant and say that your opinion is an opinion? It's dumb.

So if you see any new online rituals on BBS's or the Internet or on the various online services, send them along and we'll discuss them. Send to **John C. Dvorak c/o Boardwatch Magazine**, 8500 West Bowles Ave., Suite 210, Littleton, CO 80123 or e-mail to **RITUALS@BOARDWATCH.COM**

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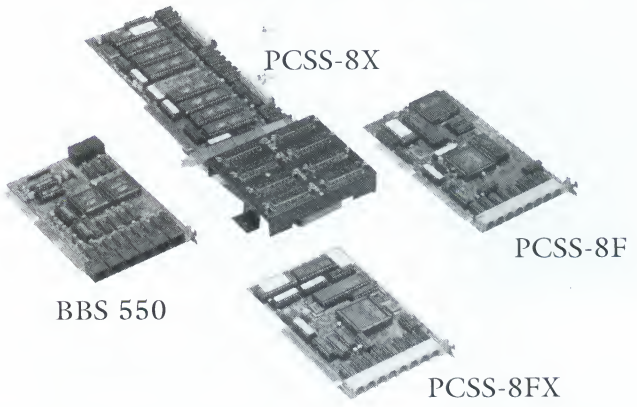

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TELEBITS

RUMORS AND FACTOIDS

CompuServe - now sporting some 1.5 million accounts and reportedly adding 60,000 new members per month, has nevertheless felt the sting of competition from lower cost online services. **America Online** has grown to 500,000 accounts with a $3.50 per hour access cost and Prodigy has nearly recovered all of it's lost accounts from the summer implementation of their $3.60 per hour access charge to BBSs etc. CompuServe, by contrast, was charging an $8.95 monthly fee PLUS $8 per hour for 2400 bps access and a whopping $16.00 per hour on the higher speed 9600 bps and 14,400 bps services. While the rising tide of interest in online services was indeed lifting all the ships, there did appear to be some leakage in the CompuServe boat due to the pricing disparity. On January 14th, CompuServe announced an impressive 40% cut in hourly connect charges - bringing 2400 bps access down into the $4.80 per hour range and the higher speed connections at 9600 bps and 14.4kbps to $9.60 per hour. Monthly base price remains at $8.95 and the new rates went into effect February 6, 1994. While this remains on the "premium" side of the price curve, it has at least brought the cost of the service down into the realm of reality. And they've developed a substantial International presence with over 90,000 European subscribers.

Apparently the company is making further changes both internally and publicly. They introduced a new Windows-based software program titled **WinNav** that finally addresses the need for offline processing of forum mail. For years products such as **TAPCIS** and **OZCIS** have allowed CompuServe users to dial up the service, download mail, and read and respond to it offline. WinNav is the first product introduced by CompuServe itself to perform this function.

Prodigy meanwhile is enjoying some success with their Internet connection. Despite limiting the access initially to a select group of Prodigy users, and requiring use of an external software program, rumor has it the Prodigy/Internet gateway is passing some 200,000 personal e-mail messages monthly almost from the first month.

Bruce Katz, founder of the Rockport Shoe Company and board member for the **Whole Earth Lectronic Link** (THE WELL) in Sausalito California, has owned a half interest in the WELL since 1991 through the Rosewood Stone Group. The Rosewood Stone Group purchased all remaining shares in the WELL during the final days of December from the Point Foundation, publisher of the Whole Earth Review and Whole Earth catalogs. The WELL currently claims some 8000 users and a staff of 16.

MCI has made a big announcement regarding their networkMCI plans to build their own Internet for voice, data, and video at a cost of some $20 billion over the next six years. It's billed as an International Information Highway.

MCI seems serious about building their own commercial Internet in this fashion. And they may just have the wherewithal to do it. For one thing, MCI was partner to IBM in a subsidiary called Advanced Network and Services or ANS. ANS has had the Merit contract to provide the National Science Foundation backbone network that at one time was nearly synonymous with the "capital-I" Internet. Further, MCI has just named Dr. Vinton Cerf as senior vice president of data architecture for MCI's Data Services Division. Dr. Cerf was on the team that originally developed the TCP/IP protocol suite used in the Internet, and is currently also president of the Internet Society. He also assisted earlier in the development of the MCI Mail service. He will be responsible for developing the network architecture for MCI's data services and integration of data with video and voice. With Vint Cerf onboard, their experience from the ANS collaboration, and a willingness apparently to pump some $20 billion into the project, (the entire NSF funding for the Internet in all of history barely exceeds $40 million) MCI may well pull it off - leaving most of the other players in the dust.

The company is deploying **Synchronous Optical Network** throughout their domestic network and to some degree even Internationally. And they have alluded to the fact that they can increase data throughput on SONET from the current top speed of 2.5 Gigabits per second (Gps) to 10 Gps. The NSFnet backbone uses the MCI SONET link from Los Angeles to New York now.

MCI also intends to splurge another $2 billion to introduce local telephone service in 20 major metropolitan cities - first stop Atlanta. The new move, termed **MCI Metro**, gets a boost from the company's purchase of rights-of-way from Western Union Corp. four years ago. This gives MCI physical access to some 2000 office buildings in 200 cities. The company thinks it can reach 40% of its business customers with existing rights-of-way in the top 20 markets. But the real driver behind the MCI Metro move is the local access charges the carrier must pay local bell telephone companies with each long distance call. MCI claims 45% of their total long distance revenue goes to these local access charges to the tune of some $300 million annually.

Apple Computer announces the launch of their own commercial online service to open in April. Titled **eWorld**, it is quite intended to compete with Prodigy, CompuServe, and America Online. Last year, Apple announced an investment in America Online that gave them access to the interface technology. Initially for Macintosh systems, a Windows connection package is expected. Initial pricing will be $8.95 per month with two hours access included and additional time at $4.95 per hour. Peter Freedman of Apple is heading up the project.

America Online announced they have reached the 500,000 member milestone with some 150,000 new members in the last 90 days of 1993.

Ameritech and **General Electric** have created a joint venture with GE contributing the General Electric Information Services and **GEnie** while Ameritech ponies up some $472.5 million in cash. GEIS currently sports some $600 million in annual revenues. Ameritech is initially loaning the money with it convertible to 30% equity if regulatory hurdles are overcome.

Hellene S. Runtagh will head the service.

Bill Gates wed one of his Microsoft employees, Melinda French, on Saturday, January 1 at the Manele Bay Hotel golf course in Lanai Hawaii. As we reported last year, rumors persist of a Microsoft online service - now known to be titled InfoServe.

GALACTICOMM ANNOUNCES MAJOR BBS VERSION 6.2

Galacticomm, Inc. has announced a significant upgrade to their BBS software package, **The Major BBS**, available as of February 1994.

The new release sports some new and enhanced features that indicate pretty impressive programming activity down in Fort Lauderdale, including a vastly improved file manager, internal QWK mail support, polls and questionnaires, standardized RIP menus, and a notable performance increase on port servicing.

The latter carries some interesting history. According to Galacticomm President Scott Brinker, he took strong exception to a response we made in the LETTERS section advising a reader that we knew of only one BBS software package capable of servicing 64 lines at 14,400 bits-per-second from a single PC in a world of file suckers. His exception was that the software we mentioned, **eSoft's TBBS**, was NOT The Major BBS, and as Galacticomm sold The Major BBS with an upper line count of 255, he vowed to make us eat the blackbird.

So it was that they decided to set up the "Jack Rickard Challenge" at ONE BBSCON to demonstrate once and for all that they could handle the ports by actually setting up a 64 line system with 64 lines - complete with laptops etc plugged in and sucking files.

But they did want to test the "challenge" machine before enduring the nightmarish logistics of getting all of that to Colorado Springs. And he learned a surprising thing - The Major version 6.1 wouldn't do it. At about 40 lines, the data rates on each port began to plummet.

So they took it as a mission to do 64 lines. And they developed an interesting test fixture. Originally the "Rickard Challenge" it later came to be called the Megapuss. It features one 486-66 uncached machine running Major BBS, and a second 486-66 running as the "file sucker". The two were attached by a morass of 64 serial cables through two "Galactiboxes". The file sucker connects to the BBS and randomly searches for and downloads files - so that it isn't simply a reiterative download of the SAME file, but actually simulates 64 callers browsing and downloading. And they began to tune The Major BBS to increase port performance - very nearly a black art.

The result's, as of the first of the year, was that they could lock 64 ports at 14,400 bps, and run all of them at an average speed of 1312 cps. This is a little bit shy of what BBS operators think of as 14,400 bps performance. Typically, you lock your DTE port speed at 38,400 bps to connect 14,400 bps modems. This is because the error correction provided on most such modems provides about a 1.18 gain by stripping the start and stop bits resulting in a maximum data speed of a little over 1700 cps on compressed ZIP files. But it represents a good programming effort, some solid test data, and for sysops using The Major BBS - a pretty startling increase in performance with this 6.2 release. In fact, the company later reported averaging 1600 cps on 64 lines locked at 38,400 bps. Engineers at Galacticomm continued work on the port performance throughout January and we would expect some further improvement.

In actual practice, few systems require the ability to allow 64 simultaneous callers to be downloading files at 1700 cps at the same time. First, currently only slightly over half of the typical caller universe HAS 14.4 kbps modems. Secondly, you can statistically count on some portion of those logged on to be picking their nose, lighting cigarettes, browsing file areas, etc. And it is true that one of the more popular applications of The Major BBS, at least in the public BBS arena, is the chat/social BBS where 2400 bps connections are overkill for real time chat. But according to Brinker, a big segment of their market is actually business BBS installations. And we have to believe the performance increase will be welcomed in that quarter. And the ability to publish actual test data is just a lot more credible than the "we can do it all" posture.

The more visible improvements were also pretty impressive. Most notably, the awkward file interface of 6.1 has been completely renovated to allow callers to browse files much more comfortably. They can page both forwards AND backwards through a file listing. An on-screen cursor is provided to highlight files of interest. The SPACE bar tags the file for addition to a "batch" that can be downloaded later. The ENTER key calls up a screen providing additional information about the file. And the required link of files to message areas is essentially abandoned. Operators can now designate joined libraries containing local files, CD-ROM directories, and even directories on other machines. A BTRIEVE index of file names and descriptions provides very quick searching capabilities. And files can be listed by filename, by date, or even by popularity (number of downloads).

The questionnaire features of 6.1 were also redone from scratch with both polls and questionnaires now supported. Polls can be yes/no, true/false, or multiple choice and the program tallies the results. Questionnaires or more open ended and the results can be saved to BTRIEVE files, ASCII files, or discarded. And entries can be tied in directly to the userlog.

Minor improvements include changes to QWK offline mail to bring it in as an integral part of the program structure. And they have added standardized RIP menus to the product. This is actually a bit of an interesting development falling into the area of "lessons learned." There has been a great deal of discussion of graphics online, and we here at Boardwatch have probably been among the worst contributors to the hype over this. But as we have noted, the power to create is the power to make ugly. And according to Brinker, what they found in discussions with their user base, is that everyone WANTS pretty screens and a graphic interface. Almost no one actually wants to deal with drawing anything to make it happen. So in version 6.2, they include a series of canned RIP graphic menus that the operator can select and implement, without actually having to draw anything. The provid-

ed set is actually pretty attractive. And so you can install version 6.2 and "have" pretty screens, without actually designing much of anything yourself.

The new version was scheduled for release at the end of January, and should be available now. We would note that in addition to the notable improvements, the overall product seems a little less "unbundled" than previous versions which offered additional modules for files, menus, entertainment, and so forth. One of the strengths of the product remains the wealth of options and third-party software, but the 2-line introductory version seems more complete in this release, and is available at $259. **Galacticomm, Inc.**, 4101 SW 47th Avenue, Suite 101, Fort Lauderdale, FL 33314; **(305)583-5990** voice; **(305)583-7846** fax; **(305)583-7808** BBS.

MICROCOM INTRODUCES 28.8 KBPS V.FAST MODEMS WITH PARALLEL PORT INTERFACE

Microcom has introduced two new V.Fast Class modems with a very attractive sysop discount program and a very strange twist - a parallel port interface.

The **Microcom DeskPorte FAST** destop fax modem and the **TravelPorte FAST** portable fax modem are now shipping at a fairly attractive list price of $499 each. These modems use the same Rockwell V.FC chipset as Hayes, and offer modulation data rates of up to 28.8 kbps over standard voice telephone lines.

But Microcom has developed a very different solution to the problems such speed poses to the current computer hardware/software. While **Hayes** developed a serial port card with 16550 UARTS and an extended 1 KB data buffer, Microcom went to the PC's parallel port to acheive data rates of 115 kbps and higher. Both modems DO support standard serial port connections, but they also support parallel port connections, and the modems come complete with both the necessary RS-232 serial cable AND a parallel port cable. They also come with a Windows COMM driver to take advantage of the parallel port connection.

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Microcom TravelPorte FAST portable fax/modem -$499

The company makes a compelling case with regards to Windows communications. The parallel port design basically passes the data in 32 byte or 64 byte blocks from the modem to the PC. This reduces the interrupt events the PC has to service from the typical 11,000 times per second, to as little as 360 times per second. And of course, the ability to transfer the bytes in 8-bits in parallel naturally improves the efficiency of the link. The result is fairly impressive improvement for Windows communications. But the solution seems strangely Windows myopic. We found no indication of a DOS driver for this parallel port mode.

The TravelPorte model may enjoy some particular popularity. The only laptop model we are aware of that sports a 16550 buffered UART is IBM's pricey **Thinkpad** series. Windows on the laptop seems to be gaining ground quickly. If no where else, this parallel port option makes sense on a Windows laptop.

The modems do offer some other advantages. They include the Microcom Networking Protocol (MNP) Class 10 which is emerging as a standard for providing the necessary error correction for cellular telephone modem communications. Microcom of course developed MNP which through class 5 was nearly ubiquitous among modems until V.32bis incorporated V.42 error correction and V.42bis compression. MNP 10 however has emerged as a very necessary adjunct if you want to use a cellular phone to make the connection.

The desktop model also features an LCD panel indicator. We've grown very enamored of modems such as ZyXEL and Practical Peripherals that offer these very informative LCD displays to indicate what modem speed you've actually acheived on the connection. Particularly with V.FC, you may often drop down to 24 kbps, 21 kbps, or lower and the LCD indication displaying speed can be very useful.

The modems also feature a flash downloadable memory function containing the operating software allowing you to download upgrades from the Microcom BBS. The company does forsee a chip replacement when the ITU does standardize on V.34 next June. But they have already announced an upgrade price to V.34 of $39 and you can either return the modem to have it upgraded, or simply order the chip and install it yourself.

Microcom DeskPorte FAST desk top modem - $499

Other minor items include a five year warranty, DOS and Windows fax software, and some interesting callback security features that allow you to enter up to 20 users in the modem memory and supports both security access and dialback security functions.

Microcom has not historically been very active in the BBS community. But with these new models, they have introduced a BBS operator discount program we found quite appealing. The qualifiers are pretty similar to other discount programs, and you can purchase as many modems as you have active lines on your BBS. The modems are discounted to a very attractive $289 - exactly a dollar more than the Hayes models, but the FIRST TWO modems you buy under this program are discounted an ADDITIONAL $40 to $249. That's got to be counted as an attractive price on a top of the line modem, and while Microcom has historically been known in the BBS community only for their protocol, they've been a respected modem manufacturer for many years. **Microcom, Inc.**, Attn: SYSOP Order Administration, 500 River Ridge Drive, Norwood, MA 02062; **(617)551-1000** voice; **(617)551-1988** fax; (617)225-1125 BBS.

QMODEMPRO FOR WINDOWS RELEASED

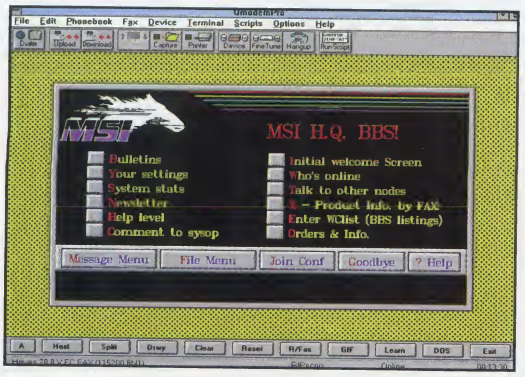
Mustang Software, Inc., is shipping Version 1.0 of their **QmodemPro for Windows** communications package offering data and fax communication in one integrated package.

The new release is the first appearance of QmodemPro for the Windows environment, and it appears to be a good one. One of the strongest features of QmodemPro for DOS was an electronic mail manager providing gateways to MCI, CompuServe, QWK mail and an integrated mail management database allowing you to pool mail from all these sources, read and reply, and have the replies automatically go back out to the proper service. This feature received little notice from the rest of the computer press, who are only now discovering a new genre of "mail managers". We were disappointed this feature wasn't included in the Windows version.

But Windows is winning. And increasingly, we are drawn to this platform for a variety of tasks. Communications in Windows is normally a pretty troublesome affair. But QmodemPro installs easily and in our casual testing, performed flawlessly.

The program supports a strong bevy of file transfer protocols including Zmodem, CompuServe B+, Kermit, Ymodem, Ymodem/G, Xmodem/1K, Xmodem/1KG, Xmodem/CRC, Xmodem, and ASCII. Background downloads appeared to be flawless, and GIF images downloaded can be viewed as they make the trip.

One of the most likeable elements of this program is something I know just a bit more than I quite understand. I've had some difficulty adjusting to Windows terminal programs in that whatever font or view is selected, I somehow wind up with the wrong screen size - either a tiny tunnel in the center of the screen, or very strange looking text, part of which DID in fact appear on the screen, and part of which may have appeared on someone else's screen for all I could tell. I



always assumed it was because I didn't have a clue what any of the proper parameters were, and if I only read 60 or 70 pages of the book, it would all become crystal clear. Rub a lamp.

For some reason, the issue just never came up with QmodemPro - good enough to win my little online heart. The screen was large, the characters very normal looking, and if there's a way to hose this up, it was

non-obvious sufficiently that I didn't hose it. GIF images could be zoomed in and out with ease as they downloaded.

QmodemPro is the first Windows communications package to support RIPScrip - the Remote Imaging Protocol that allows BBS systems to present a more graphic mouse-driven interface. Mustang's BBS software, **Wildcat!**, also supports RIP, which pretty much qualifies Mustang as the only vendor with both ends of this graphic connection. It looks pretty good. We dialed the "headquarters" BBS using RIP and downloaded a GIF image - to pretty good effect.

The program also has a new script language - resembling the BASIC programming language - a move away from the C language look that has become prevalent and probably a bit easier for the novice to play with. Not only can scripts be tied to dialing directory entries, but the dialing directory can be viewed as a series of icons. The result is that you can automate your logon and tie it to an icon - thereafter click on the icon to logon to a service. Tres Windows.

Finally, we should mention the fax capabilities of QmodemPro. Most modems now sold feature fax capabilities, and some fax capability is becoming standard for terminal programs. QmodemPro's is very good. You can both send and receive faxes and a fax viewer allows you to view thumbnails, zoom, copy, and print fax faxes.

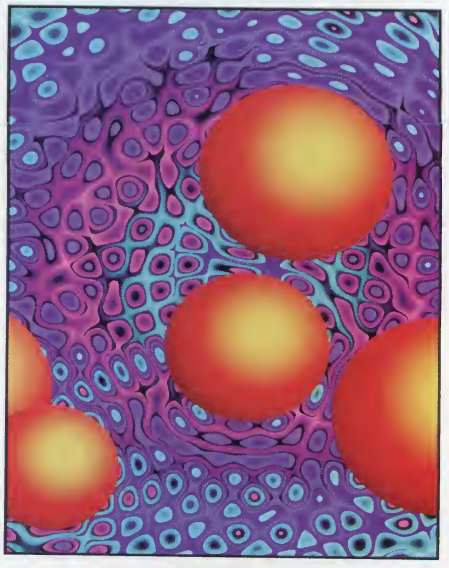
We had some difficulties faxing largish .PCX files. And we did encounter some anomalies between the RIP terminal emulation and Galacticomm's product support BBS that caused a general protection fault. But overall, QmodemPro is a very capable new addition to your Windows arsenal - with some of the usual Version 1.0 difficulties. The product is priced at $139, and heavily discounted at over 300 Software Etc. stores. Registered owners of previous Qmodem versions and Wildcat! BBS can upgrade at $50. Mustang Software, Inc., PO Box 2264, Bakersfield, CA 93303; (805)873-2500 voice; (805)873-2599 fax; (805)873-2400 BBS.

ANDY WHARHOL GET BACK - TIM STRYKER'S DIB ART

Tim Stryker started life as an online adventure game programmer in the very early days of Commodore PET computers. He built a mult-million dollar BBS software company (Galacticomm, Inc.) with a BBS system titled **The Major BBS.**

Last year, he turned operation of Galacticomm over to Scott Brinker, current President of the company, to pursue "other projects." Among them is software development to further the cause of electronic democracy.

But somewhere along the way, Mr. Stryker took an interest in art - specifically computer generated art. He's developed a series of C language applications centered around the concept of a device-independent bitmap (DIB) that plots various mathematical functions to full color presentation. The resulting output is reminiscent of the early '70's fascination with black lights, tie-dyed T-shirts, and poster art. We found them sufficiently engaging to use a couple of his works in this issue of the magazine - our cover background and the Internet Notes panel. Stryker alludes to the possibility of some commercial software product ultimately derived from his "home grown" graphics suite.



Artist Tim Stryker

The Voyager III Bridge

EVENT HORIZONS' VOYAGER III MULTIMEDIA TOUR OF SOLAR SYSTEM

The term "multi-media" has really grown into the derivative term "multi-media whatever that means" in the computer press. Everyone is deriding it as a non-event with the exception of hardware purveyors who have seized on it as a way to push sound cards and CD-ROMS in computer packages. But we're starting to see a glimmer of what multi-media could really be used for in the future. And it does appear to be additive in some applications.

Jim Maxey and the **Event Horizon BBS** are known for a number of things. It is arguably the most profitable BBS operation in the world. The BBS operates on a single PC supporting 64 lines with high speed modem connections. A staff of 19 works on customer service issues and the high resolution scanned images for which the system has become reknowned.

But the image is not all rosy. Critics contend the $3.5 million annual take from the BBS largely reflects its focus on adult GIF images. And the system was subject of a copyright infringement lawsuit by Playboy Magazine two years ago that accused the company of scanning and distributing images from the magazine. While the suit was settled out of court, Jim Maxey has admitted a cash settlement to Playboy of some $500,000 among other terms.

The company's most recent move is therefore a bit of a pleasant surprise in many ways. Maxey and programmer Jeff Butsch have developed a cunning bit of software they call Voyager III that provides a very graphic tour of the solar system and sports a considerable bevy of innovative features. Poetically, it returns focus to the original theme of Event Horizon - astronomy and space images.

The program was developed using a system titled **Multi-Media Graphics Animation System for Professionals or Multi-Media GRASP**. Developed by John Bridges, it is currently distributed by **Paul Mace Software** of Ashland Oregon, and it allows development of animated sequences for the PC with graphics, sound, and motion.

Maxey and Butsch have employed this system to develop a multi-media tour of the solar system. The program starts with a view of the bridge of the space ship SS Andrea. A wheel-shape space station rotates on the viewscreen before you and the bridge is adorned with a variety of widgets and controls you click on with the mouse.

A list of destinations can be accessed via the navigation function, and the product we used listed Jupiter and Io as destinations. We clicked on Jupiter, and the space station slid from the monitor screen. The scene changed to show a bizarre looking space craft on screen - in motion. It wheeled and shot out into space - displaying a very striking lens flare as it passed in front of the sun - nice touch.

It approached Jupiter rather quickly (fast ship?). A diagram appeared on screen showing the path across the solar system the ship was taking to reach Jupiter. The screen then displayed an image of Jupiter growing quickly on the screen. The impressive part of this is it really WAS an image of Jupiter - not a rendering of Jupiter, but a photograph taken by Voyager's I and II - obtained from the Jet Propulsion Laboratory. The result was very realistic (we would assume -not having actually BEEN to Jupiter before).

Once in place, an information system menu can be accessed. This menu allows you to click on various items that provide information. The first entry provided a six page (screen) text information file about Jupiter, it's size, mass, and so forth. Other items provided actual views of Jupiter's great red spot, weather patterns, moon system, and even photos of some of these moons - again JPL photographs.

The largest moon of Jupiter is Io, and this was listed as a separate destination. We clicked out way back into blasting for Io quite easily. It was actually better done than Jupiter with not only Voyager photos of this volcanic moon, but the photos were annotated with a good deal of information about Io showing surface temperature at various places, indicating size, and pointing out active volcanos. Other information items showed additional views of the moon and a couple showed active volcano eruptions from the side. The

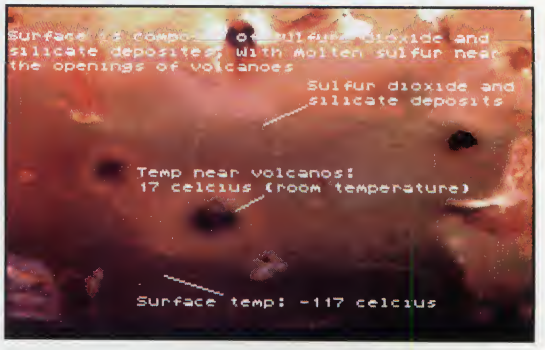
result was a superb summary of Io that was visually attractive and very educational.

The entire effect, with sound if you have a soundblaster card, was nothing like the cartoonish versions of solar system tours we've seen in the past. The use of actual Voyager photographs make this an intensely interesting tour.

But plans for the ship Andrea are even more intriguing. The design of the program is quite modular. Additional modules are in the works to provide journeys to all the planets as well as the known moons of the solar system. The basic program and the Jupiter module run roughly 700 KB in size - not bad considering the graphics. But large enough that if you were going to cover the entire solar system in depth, you wouldn't want to download it all on a 1200 bps modem anytime soon. So the company plans additional journey modules.

But that isn't actually all there is to it. We are prone to click that mouse when a mouse is there to be clicked. For example, we clicked on what looked like a little placque on the wall of the bridge, and a large placque DID appear on screen - looking for all the world like a ships charter. Similarly, we clicked on the chair displayed on the bridge, and a little advisory noting CAPTAINS CHAIR appeared on screen. Encouraged, we clicked on the coffee cup on the desk (FRENCH ROAST) and a pad of paper, which turns out to be a letter home to earth. If you click on the console it enlarges to show detail. We clicked on some of the details and discovered a whole series of systems for communications, weapons, navigation, etc. right down to SELF DESTRUCT - each with an advisory that they required a different, soon to be published module.

The potential for the Andrea starts to become clear. This little star ship bridge concept IS an excellent vehicle for an interactive tour of the solar system. And we are certain the educational community is going to fall swoon for this little bit of software - not a grade school in the country should be without it if Maxey completes the entire series. But it can very nearly as easily be turned into a space shootem up game as well. Better, this man runs a bulletin board system. A multiline bulletin board system. There is little reason why you can't ultimately use these "not quite here yet" weapons modules, communications modules, etc. interactively with OTHER ships in the solar system, at least those also logged into his BBS at the same time.



The entire concept has a few drawbacks. Because of his fascination with hi-res graphics, the team of Maxey and Butsch just weren't going to settle for simple VGA graphics. The program requires SuperVGA - which is more of cooperative wish than a standard. We found the program worked with most plain vanilla graphics cards claiming SVGA capability, but it was actually the better graphics cards such as the ATI X0 and the Diamond Viper local bus cards that the program would not run

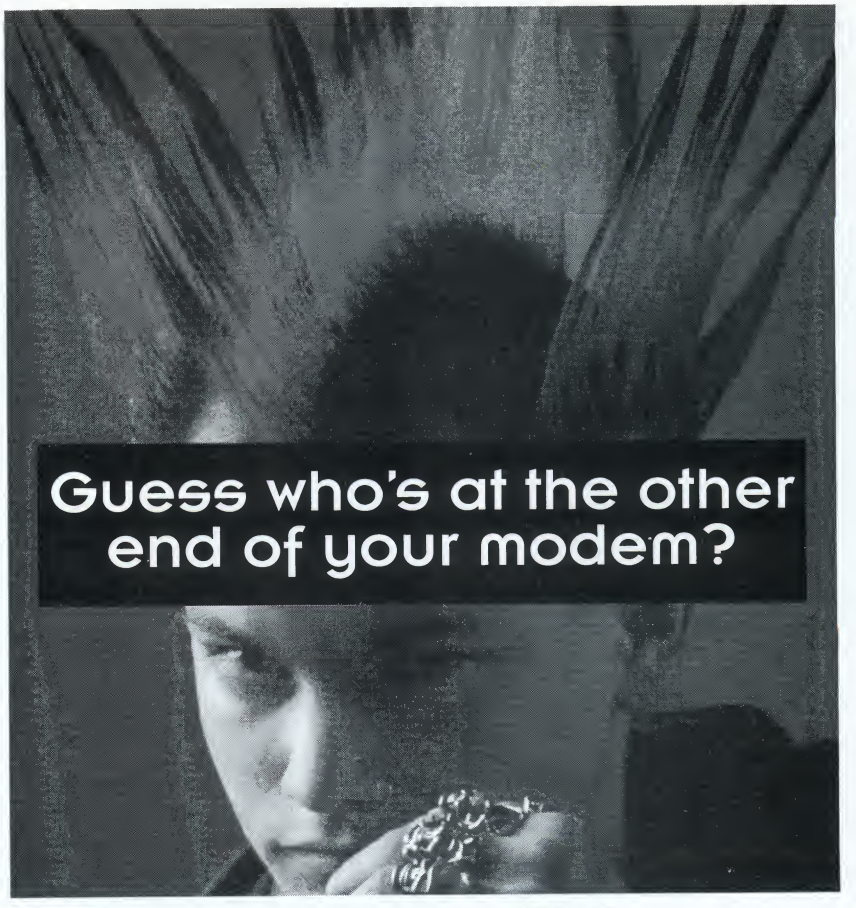
Probe images of volcanic eruptions

on. There are some "fixes" available and switches you can enter when running the program, but they are a little bit less than an ideal solution at this point.

Further, Maxey suffers from a critical lack of generosity of spirit - so often the lethal blow to entrepreneurship online. To get the initial module you must download it from his BBS, which charges $12.00 per hour at 2400 bps and an incredible $22.00 per hour at 9600 and above speeds - they do provide some support for the new 28.8 kbps V.FC links. When the program is downloaded, a program "serializes" your copy on the fly. Thereafter, if you wish to obtain additional modules, you have to logon to the same account and download those from the SAME account. They are ALSO serialized and must MATCH the main program to work. You can't swap and trade modules with your friends or via other bulletin board systems. We fear this little gotcha will severely limit the life of this excellent program.

The initial program IS also available by mail at $24 for the starter program with the Jupiter/Io modules. Additional modules will be available by mail on diskette at $6-$12 each. And ultimately, Maxey claims he may put the entire series on CD-ROM at some date in the future. Meanwhile, you can direct dial his BBS at **(503)697-5100** at $22.00 per hour. They also now have CompuServe network access for an additional $3 per hour charge from any CompuServe local access number. Simply dial your local CIS number, but instead of entering **CIS** at the login prompt, enter **EVENT** to access the Event Horizon BBS.

Despite some technical installation problems, and serialization scheme certain to keep you from ever actually having all of this usably installed at all, this program should be seen somewhere by someone beyond ourselves. With the right tender loving care and some further development, we can't believe this isn't just the kind of software needed to really illustrate why computers have a role in the classroom. And if it does, it would be an almost predictable irony if the bulletin board most famous for adult GIF images would ultimately be best known for producing a series of classroom educational programs for kids. **Event Horizon**, Voyager III Department, 311 Avenue B, Suite 209, Lake Oswego, OR 97034.



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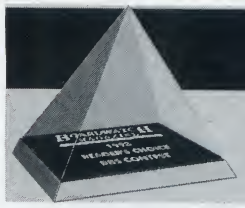

1994 Readers' Choice BBS Contest

Boardwatch Magazine is sponsoring the Third Annual Readers' Choice BBS Contest to find the 100 most popular bulletin board systems in North America - and the ONE BBS most popular among callers. The contest will run from January 1, 1994 through June 30, 1994. Winners will be announced at the **Online Networking Exposition and BBS Convention** (ONE BBSCON) held in Atlanta, Georgia, August 17-21, 1994. The Boardwatch 100 list will be published in subsequent issues of Boardwatch Magazine and distributed in electronic form world-wide.

PRIZES FOR VOTERS

All valid ballots submitted by voters will be entered in a random sweepstakes drawing. As of the opening date of this contest, prizes include five U.S. Robotics Courier Top of the line Modems, five Hayes OPTIMA 288 V.FC + FAX modems, and five ZyXEL Top of the line modems - and more are on the way. A minimum of 15 valid ballots will be selected from all entries and each will receive a free modem - from the most popular modem manufacturers in the world.

RULES FOR CALLERS

Each voter can vote once, for a single bulletin board system. Each ballot must be **fully completed**, and individually mailed by each voter. We will verify ballots as necessary. There are three ways to vote:

1. Complete this ballot and mail to: BOARDWATCH MAGAZINE, READERS' CHOICE BBS CONTEST, 8500 W Bowles Ave, Suite 210, Littleton, CO 80123.

2. Complete this ballot and FAX to **(303)933-0876**.

3. Or, dial the Boardwatch BBS at **(303)973-4222** and complete the online ballot provided on the main menu.

Balloting closes at 23:59:59 on June 30, 1994.

This contest is not limited to Boardwatch Magazine subscribers, and no purchase is required to participate in this contest. Reasonable facsimiles of this ballot are acceptable, so long as all specified information is included.

Title of bbs you vote for as the BEST: _____

Primary BBS access telephone number: _____

Is this BBS a long distance or toll call for you? ☐ YES ☐ NO

Voter name: _____ Voice telephone number: _____

Street address: _____

City: _____ State: _____ Zip code: _____

Primary communications software you use: _____

Primary modem manufacture and model: _____

Highest speed your modem supports: ☐ 1200bps ☐ 2400bps ☐ 9600bps ☐ 14400bps ☐ 19200bps ☐ 28800bps

Operating system: ☐ DOS ☐ OS/2 ☐ WINDOWS ☐ MAC ☐ AMIGA ☐ UNIX ☐ OTHER

Estimated BBS calls you make per month: _____ Average call duration: _____

Estimated investment in hardware and software: $ _____

Primary online interest (check all that apply): ☐ Mail/Mail Conferences ☐ Games/Entertainment ☐ Chat/Social ☐ News/Information ☐ Shareware (Files)

Do you also maintain accounts on commercial services? ☐ AOL ☐ Compuserve ☐ Delphi/BIX ☐ GEnie ☐ Prodigy ☐ None

AGE: _____ SEX: ☐ MALE ☐ FEMALE:

SIGNATURE: _____ DATE: _____

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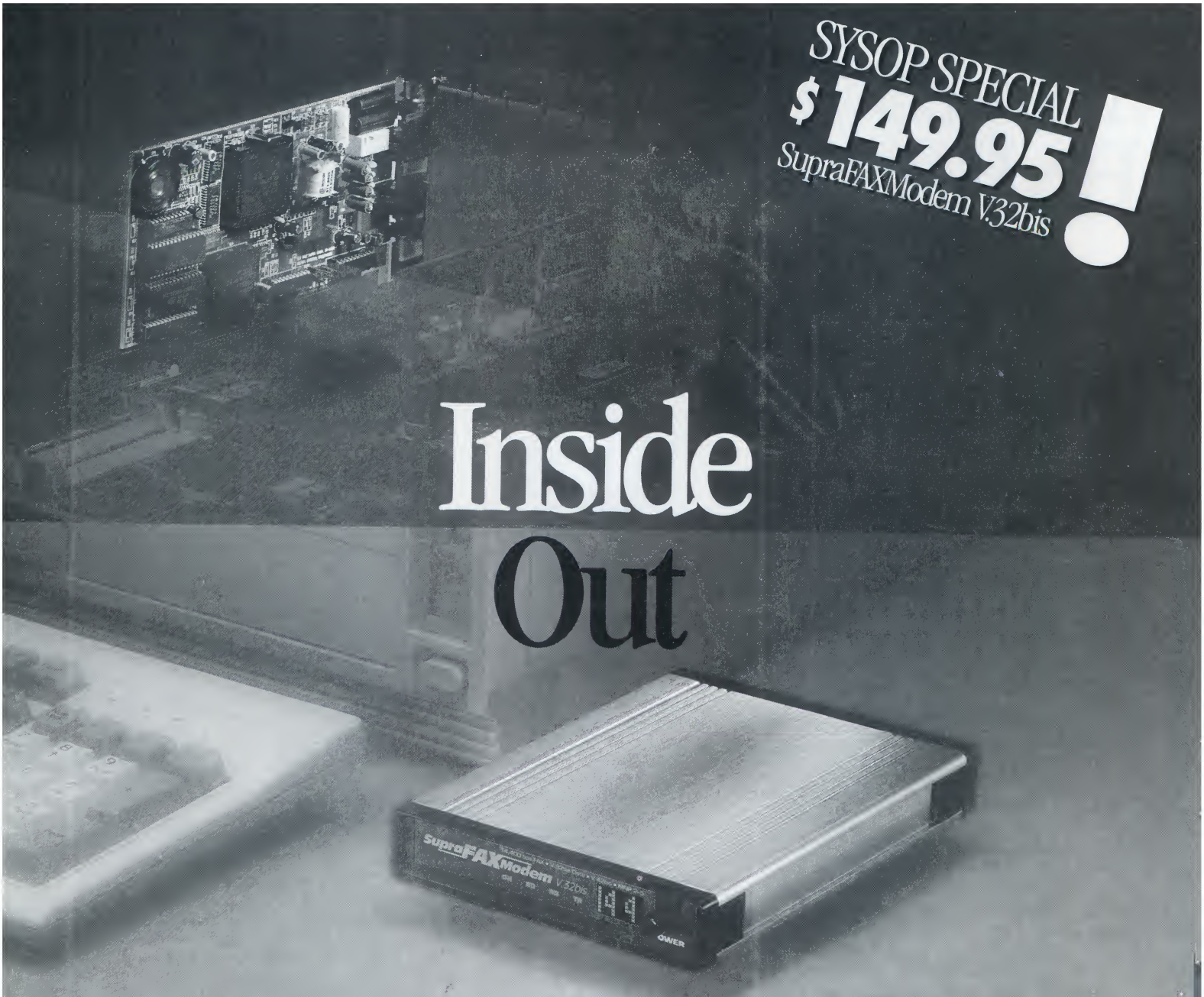

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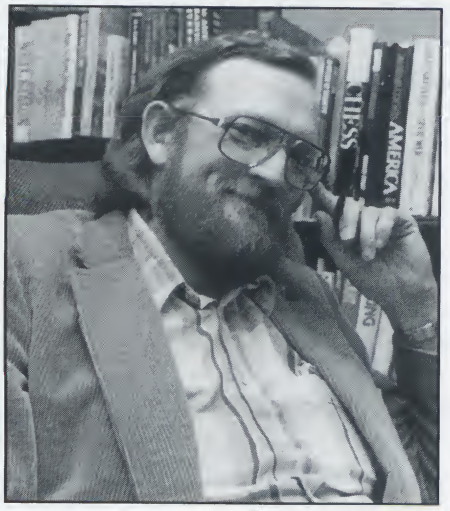


by Charles Bowen

"Computer network" is a misleading term. Anyone who is a modemming regular on these roads knows it's *people* who are doing the networking.

This is never clearer than in times of emergency. For example, within minutes of the pre-dawn Jan. 17 earthquake in Los Angeles, savvy CompuServe subscribers were gravitating toward the system's relatively new California Forum (**GO CALIFORNIA**) where they found sysop Clint Woeltjen already posting messages about what he was seeing and hearing in his part of the state.

Online visitors immediately began volunteering their services for "phone-treeing," that is, offering to relay messages to people in their areas from relatives and friends who couldn't make long-distance phone calls from the quake zone.

Within hours, CompuServe officials back East at the Columbus, Ohio, headquarters also were in the loop, establishing a special earthquake coverage area for retrieving quake-related news accounts and reaching relevant services, including the now quite busy California Forum.

The speed and ease with which this very human network kicked in illustrates just how much our electronic community has matured. The contrast is five years ago, when an equally devastating earthquake that rocked San Francisco caught CompuServe and the other commercial information services off-guard. It took calls from a non-CompuServe employee - IBM forums sysop Don Watkins - to call Columbus's attention to a job that was uniquely suited for the online community.

In San Francisco, as in L.A. earlier this year, much of phone equipment survived the quake, but phone service was stymied by the over-working of the long-distance facilities. Everyone was either trying to call in or to call out. Many people in the quake area could make local calls, but could not make long-distance calls. Since CompuServe nodes survived the quake, people online suddenly found themselves in an ideal position to serve the victims as a communications link to the outside world.

For us modem partisans, it is heartening to see our networks - so often characterizes as jargon-ridden venues for the techno-elite - being used for such basic, vital communications. ("Looking for information on my wife's parents who live in North Hollywood," said one CompuServe message in the hours after last January's quake. "Would appreciate any info on area or on them directly if anyone could get through by phone." The message included their phone number." Twenty minutes later came a reply: "I just telephoned your wife's mother ... Word is everyone is fine and their home is essentially undamaged. There was some damage, though, from things falling from shelves, but other than the above only nerves have been shattered.")

It is inspiring to see how our data-based society's preparation for this year's quake was so much better than it was five years ago. After the October 1989 quake in San Francisco, Don Watkins urged CompuServe to set up a special Earthquake Assistance Forum, a temporary service that stayed online for weeks to provide news reports, information on relief efforts, help in locating people and details of transportation availability.

The forum worked well (so well, in fact, that month after the disaster, when people at CompuServe still were talking about it, one in-house wag reportedly printed up lapel buttons that read: "The Earthquake Forum was *my* idea.")

"We learned a lot about providing service to members during a disaster," one CompuServe official said later. "It was amazing how everyone pulled together."

The big lesson was to respond much quicker to communications needs during emergencies, national crisis and major news events. The Persian Gulf War in 1990-91, the breakup of the Soviet Union in 1991 and the Los Angeles riots in the spring of '92 all prompted CompuServe to establish special temporary forums to help share the information.

A more recent descendant of the original Earthquake Forum is the Global Crisis Forum (**GO CRISIS**), a permanent online clearinghouse for news and information from trouble spots around the world, from hurricane victims in the U.S. to the ongoing problems in Bosnia and elsewhere.

Sure, it's a sad commentary that such a standing electronic committee is necessary, but it is also reassuring to realize our medium is the one that can provide it.

SPACE PIX: The idea of pictures from a space telescope is amazing enough, but that you can view them on your own computer screen within minutes of their release is mind-boggling. Still, for those who frequent the Space Forum (**GO SPACEFORUM**), it's pretty much business as usual. Want to see the latest snaps from the Hubble? Check out **WFPC*.GIF** in the forum's "Recent Uploads" Library (LIB 17). (And if you're new to online graphics, enter **GO GRAPHICS** to reach a tutorial area that covers finding and using a GIF viewer on your system.)

FINDING THE MISSING: Speaking of graphics, one of the first uses of GIF files and the earlier RLE picture files (gee, remember RLEs?) was CompuServe's Missing Children Database. Now that feature has been expanded to an entire free forum. The Missing Children Forum (**GO MISSING**), part of the system's graphics forum network, contains descriptions and computerized

pictures of youngsters who have disappeared. It is operated in conjunction with the National Child Safety Council.

DO-IT-YOURSELFING: Two new forums provide information - and moral support - for do-it-yourselfers.

The Family Handyman Forum (**GO HANDYMAN**), sponsored by The Family Handyman Magazine, discusses all kinds of projects for home-owners, from major remodeling to help with home maintenance and repair. And the Homing Instinct Forum (**GO HOMING**), operated by Time Warner, is intended for those interested in designing, building, restoring or renovating a home. That forum is run by architect/builder John Connell and other professionals from the Yestermorrow School in Vermont which specializes in design and building.

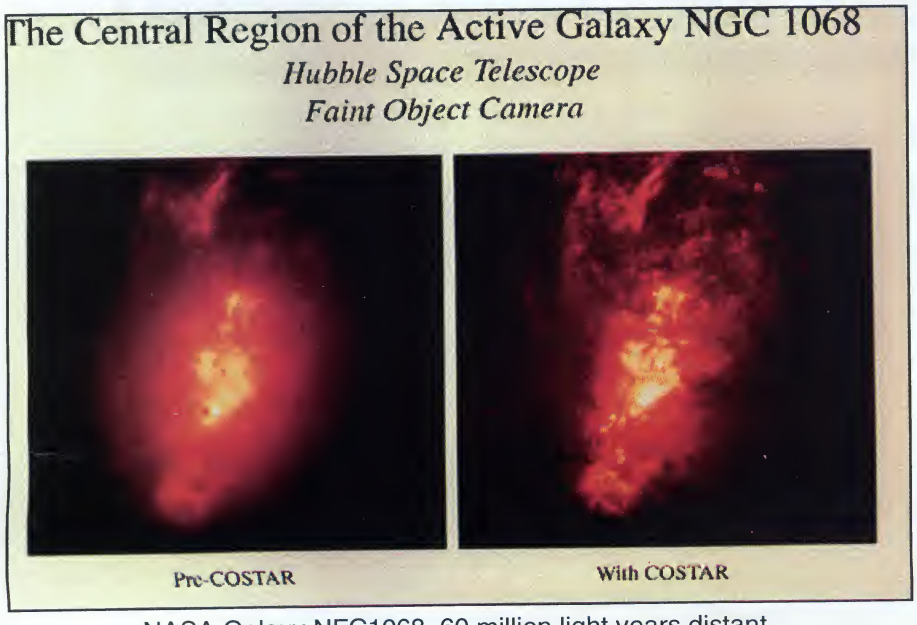
BED & BREAKFAST RESEARCH: If you're looking for a quaint little out-of-the-way place in which to build a memory on your next trip, you might want to search the new Bed & Breakfast Database (**GO INNS**). Operated by Lanier Publishing, it provides searchable data on more than 9,000 inns in the United States and Canada. The resource contains locations and phone numbers for the inns, as well as listings of amenities, types of meals served, accessibility for the handicapped, accommodation of children and pets, and price range.

Color image of Messier Object M100 from Hubble
taken after The Servicing Mission (filename WFPC00.GIF)

BECK ON BOARD: Hollywood gossip fans all know the name Marilyn Beck. She's been covering the glitter capital for years and now her daily reports are online (**GO BECK**). What's offered are five-day-a-week reports from the studios and from the personalities, producers and other power players. It is similar to the Beck column that is syndicated in newspapers by the Tribune Media Services and to her ETV Hollywood reports. Each column averages eight to 10 news reports. She is assisted by Stacy Jenel Smith.

WINNAV. NOT!: An article in the January issue of *CompuServe Magazine* advised us to **GO WINNAV** for background and ordering information on "Windows Navigator," one of the new front-end terminal program for travelling the CompuServe landscape. However, if you did that, you found that WinNav isn't WinNav anymore. An online statement reported, "Due to an ownership dispute regarding the term 'WinNav' and 'Navigator for Windows,' CompuServe will no longer be using these terms." Instead, the company has redubbed the product, "CompuServe Navigator(tm), Windows version (or "CSNav" to its friends). The program itself is the same - supporting CompuServe's proprietary Host Micro Interface - but instead of **GO WINNAV**, enter **GO CSNAV** to reach the online backgrounder and ordering data.

*[Charles Bowen is the author of **CompuServe From A to Z**, published by Random House. He also is co-author, with David Peyton, of **How to Get the Most Out of CompuServe**, also from Random House.* - Editor*]*



NASA Galaxy NFC1068, 60 million light years distant.
Before and after repair (filename FOC2_1.GIF)

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Reader Service index—page 241

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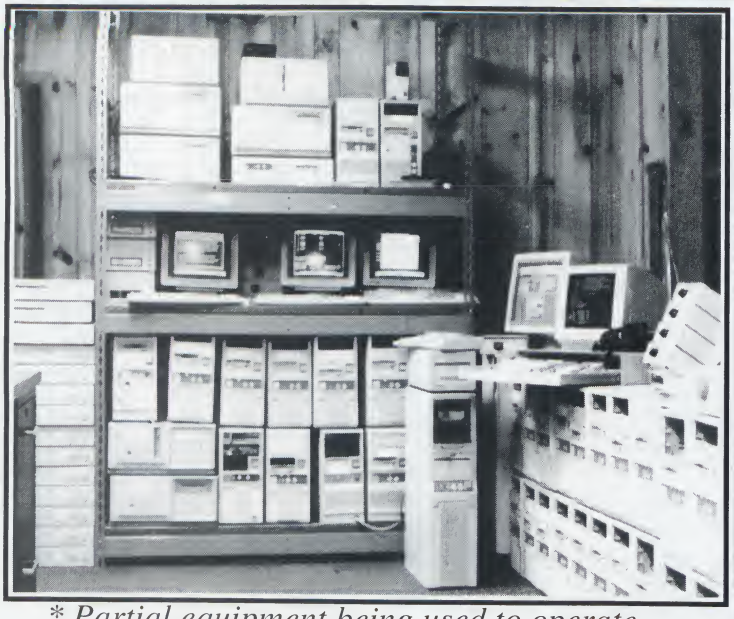

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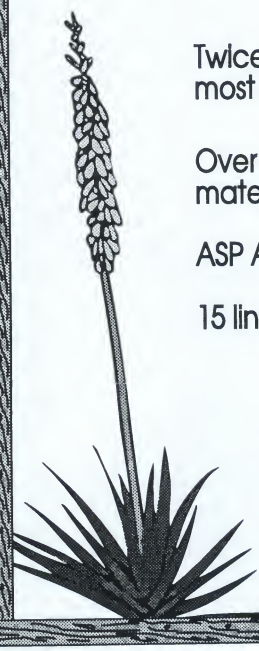

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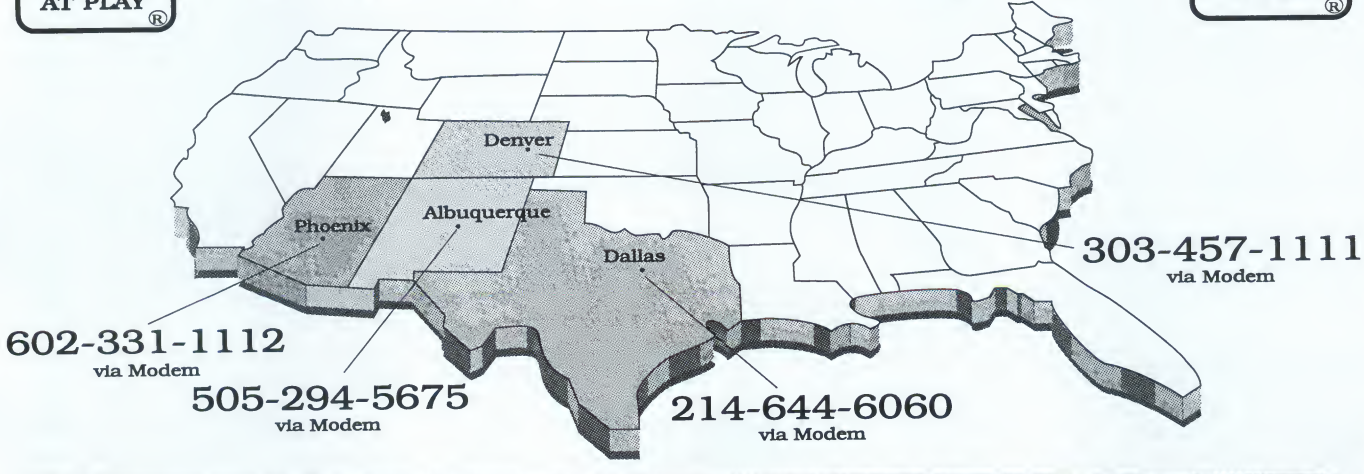

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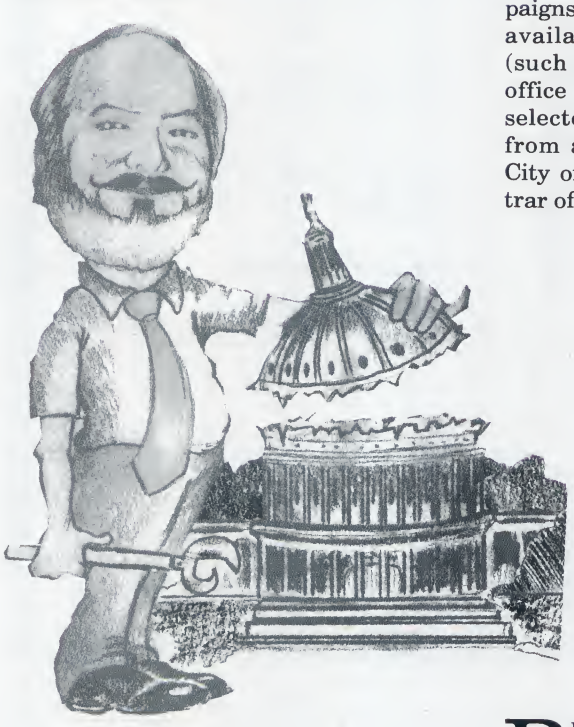
GOVERNMENT DECISIONS: WHO'S BUYING THEM? WHO'S SELLING?

by Jim Warren



You may not have noticed it, but politicians have noticed. It's an election year, again - O' Joy!

The average voter may not be able to read between the lines of political pontifications. How can we find out where candidates *really* stand?

First, look at who likes 'em enough to give them serious loot. Those who give big bucks know their recipients' views *very* well.

(It's also entertaining to see which vote-buyers are contributing to several *competing* candidates in a given race — free-market democracy in action.)

FINDING DONORS' DETAILS

Robust campaign-finance reports for federal candidates and political committees are available from the Federal Elections Commission (FEC). The FEC has one or several filings per year from perhaps 6,000 active filers — candidates, committees, political action committees (PACs), etc. Copies are usually also available in one or several state and/or local agencies — depending on the state and the race.

For state-level candidates and campaigns, state-mandated disclosures are available from a state filing agency (such as a state Secretary of State's office or Elections Commission), and selected copies are usually available from a local filing agency such as a City or County Clerk or a local Registrar of Voters.

And political disclosures for local campaigns are on file in the related local agency (e.g., school district, water district, town council), or perhaps with a local County Clerk or Voter Registrar.

Details and filing requirements vary from state to state, and also vary between local jurisdictions.

COMPUTERIZED FEC ACCESS

But, all the preceding concerned *paper* disclosures. This is, after all, the end of the 20th Century, and Gutenberg is six centuries old.

Some jurisdictions are moving beyond such political papyrus.

Federal filings are submitted by the filer on paper — to the FEC, directly, or to the U.S. House and Senate in the case of congressional candidates and campaigns. In the case of the congressional filings, Congress shoots 'em onto 16mm microfilm and delivers the 'film to the FEC.

The FEC usually has some basic summary information from all filings available to the public in a computerized database within 48 hours of receipt — key-entered and key-verified by FEC in-house staff. 72-hours hereafter, they usually have *all* of the filed information publicly-available online — keyed and verified by an outside contractor in Virginia. Magtape copies are also available.

Partly due to the hefty key-entry expense, online access to FEC data costs $20 per connect-time-hour. The $20/hour includes national dial-up access via local Tymnet and/or SprintNet numbers. Call the FEC 800-number, following, to arrange an account.

STATE & LOCAL ACCESS

Washington State and Hawaii already offer computerized political disclosures at a state level, available online.

Washington State receives paper disclosures from about 2,000 state-level filers, and another 2,500 local filers. They key-enter the state-level data, in-house (single entry; no verification), generally within three days of receipt. Access is by dial-up to Olympia, but costs nothing except the long-distance call for non-Olympians.

They have four dial-in lines, operational 24-hours per day m.o.l. (more or less). They are currently upgrading their PC-based system to use FoxPro, and will offer more extensive information than in the past, probably by April.

Other states are undoubtedly also looking at similar possibilities. (If your state is exploring computerized political disclosures, please send me details and contacts, and I'll spread the word.)

LOCAL FILINGS

Some local jurisdictions now require that disclosures be available in computerized form.

For instance, the City and County of San Francisco has mandated that the already-required disclosure information for any local candidate or political committee that, "receives contributions, or makes independent expenditures, totaling five thousand dollars ($5,000) or more in a calendar year," must be available in computerized form.

The Registrar of Voters' office is currently planning how best to implement it, expecting to have it operational later this year. [Ordinance 131-93, May 17, 1993]

(Please tell me if your city or county demands or offers computerized political disclosures.)

ACCEPTABLE USES

Here's a ringer for the online mob: The federal data from the FEC cannot be used for "commercial purposes." This clearly excludes using the name and address information on contributors for commercial solicitations, and individuals' names can't be used to solicit donations — though PAC information can be used to hustle political loot.

As of our press deadline, however, it's unclear whether BBS operators can pool their resources, download everything from the FEC's high-priced spread, and share it throughout cyberspace — including those evil, vile, capitalist, pennies-charging "commercial" BBSs.

REQUEST EQUAL ACCESS

To check this out, call the FEC Information Division (below), and ask for their policy on copying their online files for public access and redistribution — for free and for fee.

If you don't get a definitive and satisfactory response, write a letter to the Commission, stating why such use should be permitted (i.e., public information for public distribution in electronic "paperless newspapers"), and formally requesting a timely Advisory Opinion.

Point out that official administration policy regarding computerized public records is set forth in OMB Circular A-130, July, 1993, and states that agencies shall:

♦ "Take advantage of all dissemination channels, Federal and nonfederal, including State and local governments, libraries and **private sector entities**, in discharging agency information dissemination responsibilities;" [8(5)(d)(iii)] and,

♦ "Avoid establishing restrictions or regulations, including the charging of fee or royalties, on the reuse, resale, or redissemination of Federal information dissemination products by the public;" [8(7)(b)].

Probably ought to also send a copy to your Representative, your Senator and Vice Prexy Al Gore, and ask for their commitment and prompt action to support such access.

CALIFORNIA'S APPROACH

Several legislators are interested in authoring the legislation necessary to authorize and mandate computerized campaign-finance disclosures. In November, California's Deputy Chief Secretary of State Tony Miller called for computerized campaign-finance disclosures. Assuming the federal approach of agency keying of the data, Miller initially proposed a $200,000 study, and projected perhaps $3-million in annual costs. But the state's broke.

In November and December, I spoke with Miller and his staff, as well as with chief aides for State Senator Tom Hayden and Assembly Member Jackie Speier. At their request and my suggestion, I drafted a 28-page implementation plan describing how to handle both state and local computerized filings for perhaps $12,000 m.o.l. (for the state, and for each of California's 58 counties), with free statewide access. This covered about 19,000 state and local filers, and included lobbyists' disclosures and officials' statements of economic interests, as well as campaign-finance information.

CHEAP DATA ENTRY

The problem with approaches like the FEC and Washington State systems is that they require key-entry of the data from filers' paper copies — costly, tax-paid or user-underwritten, delay-ridden and error-prone. Instead, I proposed that the filers — candidates, campaign organizations, lobbyists, etc. — do the original keying of the data and file it on diskette.

Based on data from Miller's staff review of thousands of filings, it appears that probably 95% of all filings are keyboarded by the filer — either on a typewriter or a computer. With a reasonable dollar threshold before computerized filings are required, it should be essentially no additional cost or hassle to filers to submit data on diskettes — especially if they are given a free data-entry program to help them.

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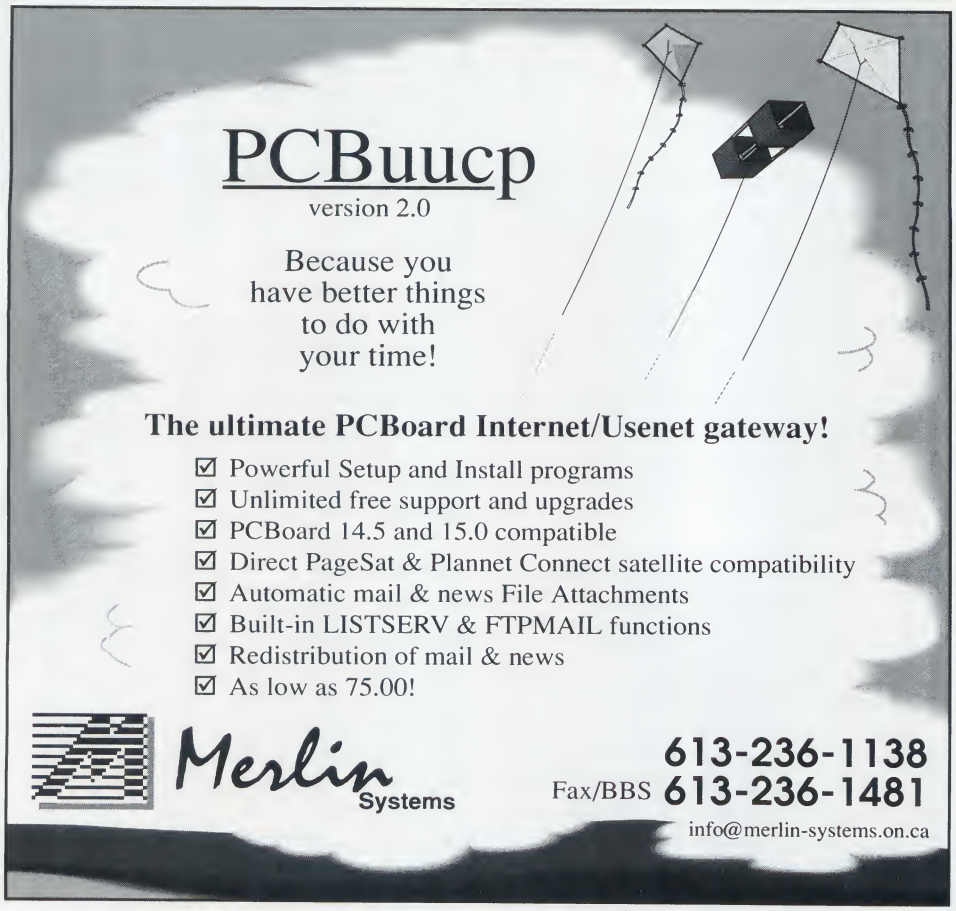

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It appears that a single diskette can hold about 560 pages of paper data without compression — due to the paper forms having lots of white space and pre-printing, but relatively little data. My proposal included details for protecting data integrity.

As of Jan. 12th, Hayden's staff liked it; Miller and his staff liked it and thought they could probably do it with little or no additional budget allocation; and, it appears likely that legislation will address the matter by the time this column appears. County Clerks and/or County Registrars of Voters in 10 of the state's 58 counties have also expressed interest — varying from enthusiastic to polite. San Francisco's Registrar Germaine Wong and her staff and I have already had a number of conversations, and they are pursuing the proposed approach.

Mo' as it Is.

SHARE WITH *YOUR* LOCAL & STATE AGENCIES

The implementation plan is somewhat tailored to California, but most of it is equally applicable to any local or state (or federal) jurisdiction. (It is entirely generic; I have no business or financial interest in its implementation.)

A copy of the proposal in RTF and MacWord5 formats is available over the Internet by anonymous ftp, WAIS, gopher, Veronica and LISTSERV access from **cpsr.org** in the directory named **/cpsr/states/california/polidisclos**. Paper copies are available by sending me a 9"x12" self-addressed, $2.13-stamped envelope.

Encourage your city, county and state to enter the modern world with an open door to its governance.

CONTACT VECTORS

Federal Elections Commission, 999 "E" St. NW, Washington DC 20463; **800- 424-9530**; fax/**202-219-3880**; (no email address they're willing to mention).

Washington State Public Disclosures Commission, Box 40908, Olympia WA 98504-0908; **206-753-1111**; fax/**206-753-1112**; (local dial-up

only; call for password and access number).

*[Jim Warren has been a computer writer, lecturer and organizer for more than 20 years. [345 Swett Rd., Woodside CA 94062; **(415)851-7075**; Internet/**jwarren@well.sf.ca.us**]*

He led the citizen effort to pass California's new law making all state legislative and statute information available online without cost, detailed how to implement it at almost no cost, founded the Computers, Freedom & Privacy conferences, and is now pushing to make all campaign-finance and political disclosures available for free, online.

*He founded **InfoWorld**, was founding host of PBS' "Computer Chronicles," founding Editor of **Dr. Dobb's Journal** and has chaired various computer organizations.*

He began working as a minicomputer programmer in 1968, holds three graduate degrees and has taught computing at Stanford and other universities
-Editor]

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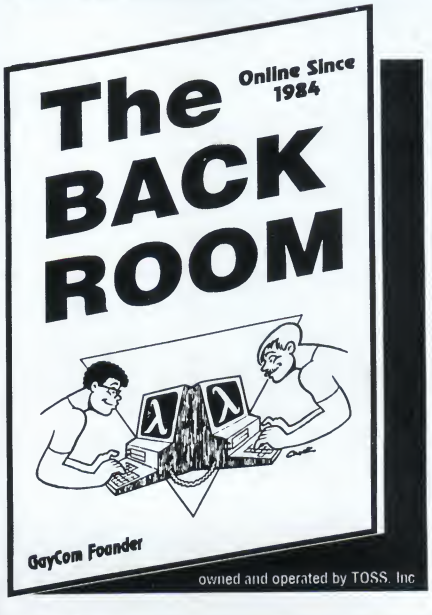

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MACINTOSH BBS NEWS

by Bill Gram-Reefer

TEX-MEX MAC BBS

The two-line **Border Connection BBS** is used by four separate user groups in the El Paso, TX and Las Cruces, NM, a 300 sq.mile area. The Border is located at White Sands Missile Range, the site of the first atomic bomb testing, testing of Patriot Missiles during the Gulf War, and the location of a dry lake bed where the Space Shuttle had to land once. Most importantly, this particular location allows users on both sides of the border to exchange information with each other without having to pay long distance phone bills.

Right now, the El Paso Mac User Group, Cruces Apple User Group, Franklin Mountain Apple Orchard, and Alamogordo Apple User Group share the same BBS. Many of the members work with NASA or have been involved with shuttle support. Jay Hunt, the sysop, is a radar technician at White Sands Missile Range.

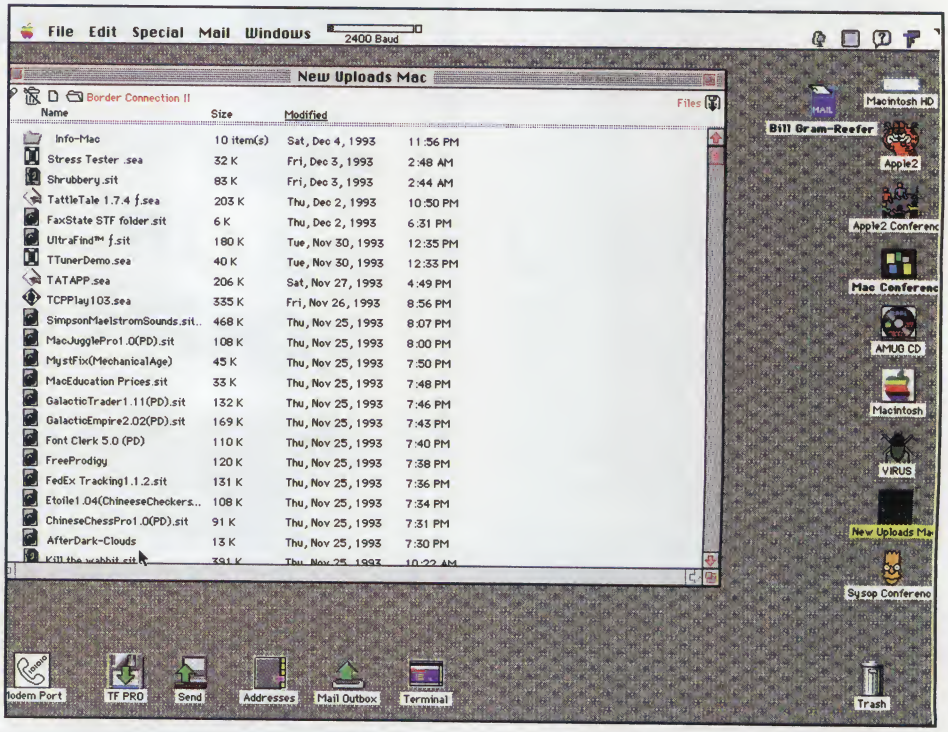
The BBS is a TeleFinder board running on a Mac Plus with 4 Mb of RAM and a 230 meg hard drive. The modems are Hayes and Supra 14.4s. The NEC CD ROM has an almost up-to-date AMUG CD (vol VIII). The hard drive is used to keep files which are newer than the ones on the CD. And, since the BBS is located so close to Mexico and has members who live and work in Juarez, Mexico, the Border offers a Spanish version of TeleFinder/User software. Call it an electronic NAFTA.

There weren't many new titles in the Apple II area (there never are, anymore), yet that conference will still deliver support since Apple killed-off its former cash cow in November '93. The Mac section is more active with not a few files in the PDA, Entertainment, and HyperCard areas, and sports a well-stocked collection of current anti-virus software. With a CD, there isn't much need to recreate the wheel, but the Border's New Uploads section is active and had some unique items, I especially enjoyed the "Free Prodigy" file now circulating that purports to be a form you can fill out to receive the service free if you fill it out and claim to be a computer store salesperson, or close friend or relative of one. You'll also find a Sysop forum.

INTERNET GATEWAY FOR TELEFINDER

TeleFinder sysops are in a dither over the announcement of **InterFinder**, a mail gateway that supports the simple mail transfer protocol (SMTP) commonly used for sending mail over the Internet. Developed by Andreas Fink of the Swiss-based Micro Frame, InterFinder works in conjunction with MacTCP and TeleFinder 3.1 to support the transfer, storage and retrieval of electronic mail. Available from **Spider Island Software** or Micro Frame, InterFinder will retail at $395. With InterFinder, TeleFinder sysops can now provide Internet mail services to their BBS clients, with the potential of adding newsgroups and FTP on the near horizon.

Controllable via AppleEvents to enable or disable the gateway using Frontier, QuickKeys, or AppleScript, InterFinder is compatible with Tabby/FidoNet installations, but does not require them. InterFinder supports translation tables for international character conversions where extended characters are converted to standard 7-bit ASCII characters for the purpose of signal transfer. Supporting the use of alias names (i.e. postmaster as alias for sysop), InterFinder, in combination with TeleFinder's administrative functions, allows sysops to selectively assign access to the gateway by user or access group.



The initial limitations of InterFinder are noteworthy, as the functionality of version 1.0 is limited to mail exchange (no automatic BINHEX file exchange), and requires TeleFinder 3.1 and the use of System 7.0 or higher. Mail text is limited to 32K. So far, additional full compatibility with programs such as MacPPP, VersaSlip, and InterSLIP, is uneven. Upgrades to version 1.1 of InterFinder will be free to registered users, however.

Nonetheless, according to Eric Hoffman, a beta tester based at the University of Chicago Campus Bookstore, "the good news is that even my beta version worked very well. When one considers the fact that Internet email access just about guarantees email access to every major online system, including Delphi, AOL, AppleLink, CompuServe, etc., this is a very exciting development." In effect, the addition of InterFinder, gives Spider Island a significant boost in keeping pace with other Macintosh-based BBS and electronic mail and conferencing systems that currently offer Internet gateways from third parties like HoloGate and Postal Union (First-Class), or ResNova (NovaLink).

Without InterFinder, according to Chris Silverberg, a developer working with Spider Island Software, makers of TeleFinder, "there are two ways to connect to the Internet (using TeleFinder). First, by running FidoNet software (Tabby or Formula One), you can receive UseNet groups and mail through other FidoNet systems. But there are a number of limitations to this, and setting up FidoNet may not be what you want to do (although Internet connectivity makes FidoNet look easy). The other way is to use ConnectYourBBS software which allows you to receive Internet newsgroups using a UUCP feed, however, you also need to run some FidoNet software to get this to work, and since it only does newsgroups, it is still limited. We are overhauling the email system in TeleFinder which will make it easier for developers to write gateways for TeleFinder, and of course this means better Internet connectivity."

In beta test, Hoffman's situation seems at first glance too rosy, since his BBS site already had access to the Internet through the campus-wide network. Most of the hard work of setting up an Internet-ready BBS had already been done, including an IP number and registered machine name. "I basically extracted Andreas' software, defined my remote-host mail server, entered my host name (ccsbbs.uchicago.edu), checked the "Send Active" option, and was off," Hoffman explained. Clearly, the true difficulty most sysops will face, especially those who will rely on dial-up access to some regional Internet provider, will be in setting up the local Internet account. Then the fun can begin. According to Fink, "Well, you just use SLIP or any other dialup TCP/IP tool to connect, and then you ask your Internet supplier to send the mail addressed to yourself by the use of SMTP only when you are connected. I use dialup myself and it works." (message sent using an evaluation copy of InterFinder 1.0b13).

Setup requires a static address and domain server information that your Internet supplier can assign to you. Further configuration for dial-up or direct-connect to your IP network over Ethernet depends on the idiosyncrasies of your own internal network setup, or on the the software tools you are using, such as VersaTermSLIP, InterSLIP, or MacPPP. InterFinder's documentation warns that these different tools use different approaches concerning the use of names, passwords, login scripts, etc. Hoffman, for instance, suggests sitting down with Engst's Internet Startup Kit to get a grip on these non-InterFinder-related conundrums.

The TeleFinder setup is more straight forward as you configure InterFinder to work in conjunction with TeleFinder's UserManager. Just setup an account for "postmaster" and "Internet" and define your access privileges and group paths. Optionally, you could setup drop boxes for AppleLink, CompuServe, and America Online since InterFinder can also send mail through the Internet to the corresponding mail gateways of those services as well; its just another address. Importantly, InterFinder takes care of the translations of the various service addresses so users don't have to figure out whether to use a comma or period, for instance, when sending mail to CompuServe.

Using TeleFinder's current mail setup, users could typically compose their email offline using TF/User, placing "Internet" in the destination box, withthe **peter_pan@second.star.on.right.com** address in the first line of the body of the message. The user would send mail normally after connecting to a TeleFinder BBS and InterFinder would do the actual transfer during the next scheduled connect between the BBS site and the Internet provider. Incoming mail would appear in the user's drop box. InterFinder also supports replies as long as the user remembers to place the address in the text body.

Overall, InterFinder installation and use seems not difficult; certainly one order of magnitude easier than working with Tabby. The true test is getting your Internet account and address details worked out, and for the most part, InterFinder will be the reason for that little bit of hair pulling, not necessarily the cause. **Spider Island Software** can be reached at 4790 Irvine Boulevard, Suite 105-347, Irvine, CA 92720; **(714) 669-9260** voice; **(714) 730-5785** bbs. Andreas Fink can be reached at **Micro Frame**, Oberdorf 123, 8934 Knonau Switzerland; **(41) 1-776-8017** voice; note time difference before you wake him up; **(41)-1-776-8017** (TeleFinder BBS Box4); **fink@box4.microframe.ch** Internet.

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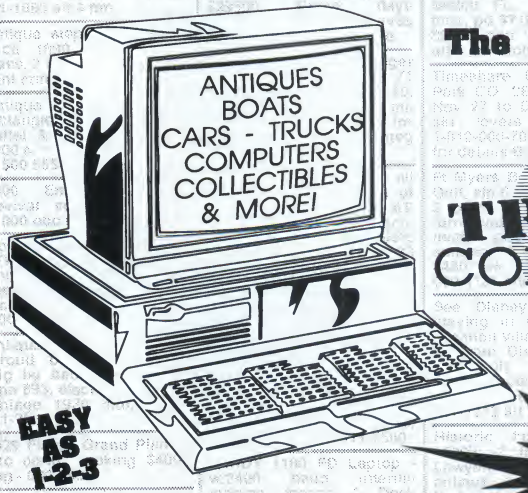

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EDUCATION LINK

by Bill Gram-Reefer

WHEELS FOR THE MIND

The increasing use of telecommunications technology in education environments has generated interest from many publishing sources, not to mention this one. Quite a few publications, newsletters, and online services offer in-depth and specific education and technology titles and electronic conferences covering a wide range of issues. With apologies to Apple's former (and wonderful!), semi-frequent catalog of Mac-based educational software, we pass these resources along to you that might even make your head spin.

First, be sure to check into CompuServe's Education Forum. Conference sections cover accessing ERIC databases, Reforms/Future Talk, SchoolNet/Online Education, and Home/Alternative Education. There are file areas for each of these sections, too, and the sysops are attentive and helpful. Also, check the local BBS listings in your own area; there's bound to be a board near you that carries networked FidoNet school topics or has an active conference area covering local school issues and home schooling. One other online source could be worthwhile if you can ever get through (it's very busy), is the toll-free BBS operated by the Office of Educational Research and Improvement of the U.S. Department of Education. This online warehouse provides education-related statistical research, bibliographies, and papers, accompanied by some bulletins and messaging areas. **800-222-4922**; 2,400 Bps; 3 nodes.

In the magazine area there is no shortage of well-written titles dedicated to computers and education. One of the leading books is **Technology and Learning** (T&L). While product oriented and just as apt to cover 3DO's interactive multimedia player and the new release of MacWrite Pro, T&L frequently covers computer-based curriculum, LAN, and telecommunications issues and products of interest to educators. Published by the Peter Li Education Group, T&L subscriptions cost $24/yr and can be contacted at 330 Progress Road, Dayton, OH 45449.

T.H.E. Journal (Technical Horizons in Education) is another magazine you should check out. Similar to T&L, T.H.E. covers new products and case studies of technology in action in education. Telecommunications stories, however, don't garner as much ink, but are not uncommon. Contact T.H.E. at 150 El Camino #112, Tustin, CA 92680.

Query positions itself as an information source on administrative computing. In it you'll find tips and in-depth features on building departmental computing environments and applications. One recent issue described how Dartmouth College is using AppleSearch as a front-end for students to use during online searches of Clarinet news feeds, and detailed the University of Chicago's online access to the Oxford English Dictionary over its campus-wide network. Published quarterly, ***Query*** will cover cabling to satellites with frequent stops in between. Heavy on the Mac and taking note of Newton and AV-Mac applications, ***Query*** editorial is application and news driven with a focus on higher education. Regular Internet, new products, and resource sections provide valuable news and tools. Highly recommended. Subscriptions are free in the U.S. to qualified college administrators and companies involved in the higher education market. The rest of us can expect to pay a well-worth-it $20/yr. Address subscription correspondence to P.O. Drawer Q, Sunnyvale, CA 94087.

Finally, the well-heeled or serious will want a subscription to the ***Heller Report on Educational Technology*** (Report). In bi-monthly newsletter format, the Report is an intense, trade-level communique bristling with news and market data for the insider involved in buying, developing, or selling education technology.

Did you know that higher education plans to spend $1.6 billion in computer purchases in 1994? Here's an item: Lee County, FL public schools are launching a $35 million education technology plan, funded with local bonds (certainly not vouchers), and plan to acquire 4,000 PCs. Want a piece of that? Or, would you want to sell your expensive database title to the 5,800 (and rapidly growing) schools currently using CD-ROM? There's more, like the 3,400 schools in 3,100 districts using satellite dishes to serve more than 24,000 schools; that Iowa just spent $77 million to complete a fiber-optic backbone to link its 19 distance learning networks for K12 and up; and the $32 million campus communication network installed by AT&T supporting 17,000 phones, 15,000 voice mail boxes, and 12,000 data communications outlets. (Ain't copper great? You just have to know how to twist it!)

It's for this kind of on-the-bounce reconnaissance that keeps companies including Lucas Entertainment, Disney, Microsoft, NEC, and Northern Telecom, to name just a few, keep their eyes peeled for the next issue of the Report. And you can too, but for the $395 retail subscription price (discounted during special to $195 for teachers). If you're in the business, or want to be, the Report looks like a must buy. Subscriber info can be had at **708-831-6604**, or fax your order to **708-926-0202**. Bill me later.

[Bill Gram-Reefer, based in Concord, CA, is president of **WORLDVIEW,** *specializing in connectivity and communications. E-mail Bill at:*
wk05156@worldlink.com - Editor]

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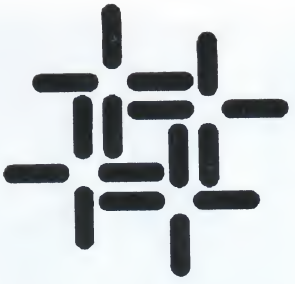

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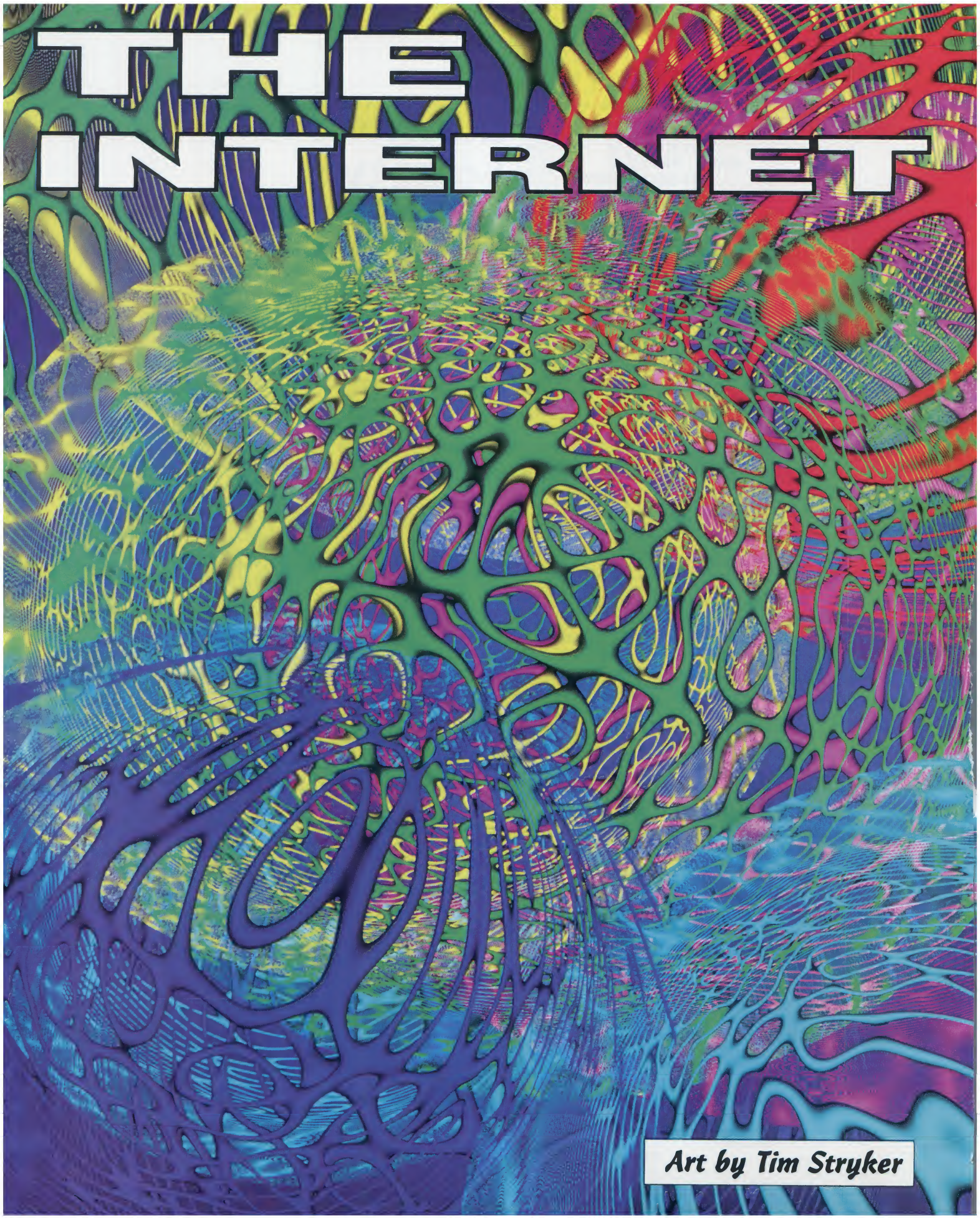
THE INTERNET
Art by Tim Stryker

THE INTERNET INDEX: FACTS AND FIGURES FOR '93

WinTreese shares our fascination with both numbers and the Internet and compiles an interesting bit of digitrivia about the network.

☎ Annual rate of growth for Gopher traffic: **997%**

☎ Annual rate of growth for World-Wide Web traffic: **341,634%**

☎ Average time between new networks connecting to the Internet: **10 minutes**

☎ Number of newspaper and magazine articles about the Internet during the first nine months of 1993: **over 2300**

☎ Number of on-line coffeehouses in San Francisco: **18**. Cost for four minutes of Internet time at those coffeehouses: **$0.25**

☎ Date of first known Internet mail message sent by a head of state: **2 March 1993** (Sent by Bill Clinton, President of the United States)

☎ Date on which first Stephen King short story published via the Internet before print publication: **19 Sept 1993**

☎ Number of mail messages carried by IBM's Internet gateways in January, 1993: **about 340,000**

☎ Number of mail messages carried by Digital's Internet gateways in June, 1993: **over 700,000**

☎ Advertised network numbers in July, 1993: **13,293**; Advertised network numbers in July, 1992: **5,739**

☎ Advertised network numbers in October, 1993: **16,533**; Advertised network numbers in October, 1992: **7505**

☎ Number of Internet hosts in July, 1993: **1,776,000**

☎ Number of Internet hosts in October, 1993: **2,056,000**

☎ Date after which more than half the registered networks were commercial: **August, 1991**

☎ Number of Internet hosts in Norway, per 1000 population: **5**

☎ Number of Internet hosts in United States, per 1000 population: **4**

☎ Round-trip time from Digital CRL to **mcmvax.mcmurdo.gov** in McMurdo, Antartica: **640 milliseconds**. Number of hops: **18**

☎ Number of USENET articles posted on a typical day in February, 1993: **35,000**

☎ Number of USENET articles posted on a typical day in December, 1993: **43,000**

- ☎ Number of megabytes posted: **81**
- ☎ Number of users posting: **9300**
- ☎ Number of sites represented: **3000**

☎ Number of Silicon Valley real estate agencies advertising with Internet mail addresses: **1**

☎ Terabytes carried by the NSFnet backbone in February, 1993: **5**

☎ Number of countries reachable by electronic mail: **137** (approx.)

☎ Number of countries not reachable by electronic mail: **99** (approx.)

☎ Number of countries on the Internet: **60**

☎ Amount of time it takes for Supreme Court decisions to become available on the Internet: **less than one day**.

☎ Date of first National Public Radio program broadcast simultaneously on the Internet: **21 May 1993**

☎ Percentage of Boardwatch Top 100 BBS systems with Internet Connectivity: **21**

Win Treese, **Digital Equipment Corporation**, 1 Kendall Square, Bldg. 700, Cambridge, MA 02139;
treese@crl.dec.com

GORE ENDORSES EFF's OPEN PLATFORM APPROACH

Vice President Al Gore announced at the National Press Club a long-term White House telecommunications policy initiative that incorporates the major elements of the **Electronic Frontier Foundation's Open Platform** policy recommendations.

The Vice President's speech, which credited EFF co-founder Mitchell Kapor for articulating the need for an "open platform" information infrastructure, outlined five policy principles for the National Information Infrastructure (NII).

Kapor said that he is "honored" by the reference in Gore's speech. "I'm awfully happy that the Open Platform is right in the middle of the Administration's infrastructure strategy, and that they see Open Platform and open access as just as important as competition.

"President Clinton and Vice President Gore deserve great credit for being the first Administration in over a decade to offer a comprehensive approach to telecommunications policy," Kapor said. "I am looking forward to working with the White House and the Congress to help see this thing through."

EFF executive director Jerry Berman said Tuesday his organization is "extremely pleased that the Administration has affirmed that neither all-out competition, nor stifling regulation, will

EFF Chairman Mitch Kapor

bring the promise of information access to all Americans." In the three years since EFF's founding, Berman said, the organization has labored to raise these issues in the public-policy arena and to promote the Open Platform approach.

EFF's Open Platform policy to support universal access to the digital information infrastructure is included in the telecommunications bill recently introduced by Rep. Ed Markey (D-MA), Rep. Jack Fields (R-TX), and Rep. Rick Boucher (D-VA).

The first principle, Gore said, is to "encourage private investment." The Vice President said this principle involves "steering a course between a kind of computer-age Scylla and Charybdis — between the shoals of suffocating regulation on one side, and the rocks of unfettered monopolies on the other.

"Both stifle competition and innovation," Gore said.

The second principle, he said is to "promote and protect competition." The vice President said the government "should prevent unfair cross-subsidies and act to avoid information bottlenecks that would limit consumer choice, or limit the ability of new informaiotn providers to reach their customers."

The third principle, Gore said, is to "provide open access to the network." Gore defined this principle in terms very similar to those of EFF's own policy statements on Open Platform services.

"Suppose I want to set up a service that provides 24 hours a day of David Letterman reruns," he said. "I don't own my own netowrk, so I need to buy access to someone else's. I should be able to do so by paying the same rates as my neighbor, who wants to broadcast kick-boxing matches."

EFF's Open Platform Proposal, released in November of this year, all recognizes the importance of access to a diversity of information sources.

The proposal states: "If new network services are deployed with adequate upstream capacity, and allow peer-to-peer communication, then each user of the network can be both an information consumer and publisher. Network architecture which is truly peer-to-peer can help produce in digital media the kind of information diversity that only exists today only in the print media."

Said Gore: "Without provisions for open access, the companies that own the networks could use their control of the networks to ensure that their customers only have access to their programming. We've already seen cases where cable company owners have used their monopoly control of their networks to exclude programming that competes with their own."

Gore also cited with approval EFF cofounder Mitchell Kapor's analogy of an "open platform" infrastructure to the open architecture of the IBM PC. "We need to ensure the NII, just like the PC is open and accessible to everyone with a good idea who has a product they want to sell," he said.

The fourth principle, said the Vice President, is "to avoid creating a society of information 'haves' and 'have nots.'" Gore said the United States will "still need a regulatory safety net to make sure almost everyone can benefit."

The fifth and final principle, he said, is that "we want to encourage flexibility." Gore said the legislative package to be offered by the White House must have the kind of flexibility that the Communications Act of 1934 had, in order to deal with technological changes that no one can yet anticipate.

Berman said Gore's speech also helps define how the Administration plans to handle the transition, following the breakup of the Bell System, between a world of telecommunications monopolies and a world in which there is meaningful competition among content and communications providers. "This speech shows that part of the White House's definition of 'managed transition' is that all citizens will have access to digital-network open platform."

EFF BOARD'S KAPOR AND DYSON APPOINTED TO NII ADVISORY COUNCIL

EFF Chairman of the Board Mitch Kapor and Board Member Esther Dyson were 2 of 27 communications leaders appointed to the Clinton Administration's National Information Infrastructure Advisory Council. The Advisory Council will work with the Administration on developing a comprehensive telecommunications policy to meet the needs of both government and the private sector.

Mitch Kapor established the Electronic Frontier Foundation in 1990 with John Perry Barlow and currently serves as EFF's Chairman of the Board. Mitch has testified before Congress on communications and computer topics on many occasions. His articles on computer networks and civil liberties, intellectual property, and software design have been published in Scientific American, Forbes, Wired and many other publications. Mitch was the founder of Lotus Development Corporation, were he served as President and Chief Executive Officer from 1982 to 1986, and designed the Lotus 1-2-3 spreadsheet program.

Esther Dyson is President of EdVenture Holdings, where she writes and publishes Release 1.0, a monthly newsletter highlighting trends in computer technology. Esther publishes a second newsletter, Rel-EAST, which shares her insights in the newly emerging commercial markets of central and eastern Europe. Esther also sponsors the PC Forum and East-West High Tech Forum conferences. Esther serves on the Board of Trustees of the Santa Fe Institute; is a member of the Global Business Network and the Women's Forum; and serves as an advisor to Perot Systems and the Poynter Institute for Media Studies.

The other members of the NII Advisory Council are:

Delano Lewis, CEO, National Public Radio (co-chair of the Council)
Edward McCracken, CEO, Silicon Graphics (co-chair of the Council)
Morton Bahr, Communications Workers of America
Toni Bearman, Dean, U. of Pittsburgh School of Library and Info. Sciences
Bonnie Bracey, elementary school teacher, Arlington County, VA
John Cooke, Pres., Disney Channel
Craig Fields, CEO, MCC
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Jane Smith Patterson, Tech. Advisor to the Governor of North Carolina
Bert Roberts, CEO, MCI
John Sculley, CEO, Spectrum Info Tech
Joan Smith, Chair, Oregon PUC

EFF HELPS TO ELIMINATE OUTRAGEOUS SENTENCES FOR COMPUTER CRIMES

Comments opposing the United States Sentencing Commission's proposed guideline for the Computer Fraud and Abuse Act submitted by EFF, SEA (the Society for Electronic Access), CPSR and others have been taken to heart. The U.S.S.C. recently announced a *new* proposal for Computer Fraud and Abuse sentencings. Instead of the single guideline for all computer crimes proposed by the Department of Justice last year, the new guideline takes into account the intention of the defendant by directing the sentencing court to the most appropriate existing guideline.

For example, under the old proposed guideline, a first time offender who accessed a computer without authority, copied a non-protected file, and posted that file to a BBS would get 10 to 16 months in prison with no parole — the judge would have been directed to the Fraud guideline and would have had no discretion to craft another sentence. Under the new guideline, if that intrusion was not done for pecuniary or malicious purposes, the crime will be treated as a misdemeanor, and the sentencing range would be 0 to 6 months. Real wire fraud done with the intent to reap financial gain or to cause harm to the system would result in the minimum 10 to 16 month sentence.

EFF is proud to have played a role in encouraging the Sentencing Commission to craft the new guideline. New communications technologies, in their earliest infancy, are becoming the subject of precedent-setting litigation. Overly strict sentences imposed for computer-related fraud and abuse may have the effect of chilling these technologies even as they develop. Until there are more cases on which to base a guideline, individual sentencing decisions are best left to the discretion of the sentencing judge, who presumably is most familiar with the facts unique to each case. Legal precedents, particularly the application of a sentencing guideline to violations of the Computer Fraud and Abuse Act, can radically affect the course of computer technology's future, and with it the fate of an important tool for the exchange of ideas in a democratic society.

The Sentencing Commission is asking for comments by March 18, 1994. It's important that we all tell the U.S.S.C. that we're happy with the new proposed guideline for the Computer Fraud and Abuse Act. In the very near future, EFF will be setting up an electronic mailbox to receive electronic comments. In the meantime, written comments can be sent to:

United States Sentencing Commission
One Columbus Circle, N.E.
Suite 2-500, South Lobby
Washington, DC 20002-8002
Attention: Public Information

A copy of the proposed guidelines is located at 58 Fed. Reg. 67522 or on ftp.eff.org as **pub/EFF/Issues/Legal/sentencing.amendment**

THE ONLINE USERS ENCYCLOPEDIA - BULLETIN BOARDS AND BEYOND

Technical books are, to a greater degree than almost any other field of publishing, audience sensitive. An excellent book on the Internet, written by a UNIX aficionado for UNIX enthusiasts, is going to miss the mark with a DOS audience. In looking through Bernard Aboba's new edition of The Online User's Encyclopedia - Bulletin Boards and Beyond, I was struck by two things: the incredible amount of research effort that had to go into these 806 pages, and what a marvelous feel Aboba has for our audience.

He also has an unusually clear vision of the role of bulletin boards, the role of the Internet, and their likely effects on each other. The book goes into good detail on store and forward networks such as FidoNet, RIME, FrEdMail, ILINK, Intelec, OneNet, InfoLink, SmartNet, North AmeriNet, WWIVNet, Alternet, Eggnet, and RBBSnet used to link bulletin board systems economically. But it also covers TCP/IP, World Wide Web, Gopher, Archie, BITNET, USENET, and other elements of the Internet.

The connection between the two worlds is an area of current intense interest, and Aboba handles it better than anything else in print. He covers TCP/IP for the PC, explains the concept well, and goes on to describe specific software solutions. He does the same thing for the Macintosh, and then goes on to discuss connecting bulletin boards to the Internet via TCP/IP. This is remarkable in that only a hundred or so DOS or Mac-based bulletin boards sport TCP/IP connections to the Internet now. He also goes into UUCP - again discussing specific software programs you can download or purchase to make it happen on your personal computer.

The book does provide some excellent guidance on using the Internet, written very clearly. But it goes quite beyond the usual **ftp/telnet/gopher/archie/www** tutorial on the net and delves into networking areas you just don't find in such books - PCBoard/QWK networks, DETAILED descriptions of the Serial Line Internet Protocol (SLIP) and Point to Point Protocol (PPP), FidoNet/UUCP Gateways, and the first lucid discussion we've found of BITNET LISTSERV operation and how to set up mailing lists. A chapter on data compression covers compression strategies for the PC, the Macintosh, and UNIX - side-by-side. He's tried to cover the entire gamut of wide-area computer communications from the perspective of what's least expensive and most effective. He did well.

The book is jammed full of software references, company names, contact information, phone numbers, all the time-sensitive things many try to avoid to keep from "going out of date" to the usual result that they never are particularly germane to ANY date. You will find this book useful.

But that's not really what I like about it. A Memories and Visions section of this book begins on page 497 that is really a series of short essays and descriptions of the early history of many of the most important networking concepts and technologies. It starts with an excellent essay by Bruce Sterling titled "Free as Air, Free as Water, Free as

Knowledge" concerning the economic pressures on the concept of free information. Aboba then analyses the politics of the Electronics Communications Privacy Act. Tom Grundner describes the birth of the Free-Net systems. Dr. Vinton Cerf, President of the Internet Society, describes how the Internet came into being. Tom Jennings, Ken Kaplan, and Ben Baker describe the birth of FidoNet. Mark Herring describes the birth of QMAIL and the resulting QWK networks. And the section continues with other network histories.

This is the documentation of networking history - who developed what, and what they thought they had developed when they first developed it. This type of information gets oddly twisted as the technology passes from one new wave of new users to the next, and it is a constant mystery to watch it come back out the other end a few years later - as if through some sort of time distortion. Aboba has effectively cast it onto pages for our future reference.

Above all, we find few writers who can actually write well. Aboba pens a powerful page, clearly lucid, well researched, and touched with the bit wry humor required to spend your life writing about technical matters. This book is expertly done, technically flawless, and written in a superb and thoroughly original style - our highest recommendation. **The Online User's Encyclopedia - Bulletin Boards and Beyond**, 806 pages, $32.95, ISBN 0-201-62214-9, Addison-Wesley Publishing Company, 1 Jacob Way, Reading, MA 01867; **800-822-6339** voice

INTERNET YELLOW PAGES

We favorably reviewed **The Internet Encyclopedia** by Harley Hahn and Rick Stout a few issues past. They're back with another new release from Osborn-McGraw/Hill titled The Internet Yellow Pages. You won't have any difficulty finding it. The cover is...well...very yellow.

This book is not a tutorial, or a be-all guide to the Internet. It is a listing of over 2400 services, mailing lists, e-mail addresses and other oddities on the Internet in some 155 categories. It is presented in the format of a telephone company yellow pages directory, and as U.S. West's television advertisements say, "It's the book that gets used."

The result is effectively a menu for the Internet. The best we can do is list some of the services we found within just a few minutes of pawing the page proofs:

HONEYBEES - mailing list information, details on honey bees and bumblebees, pollination, honey, and related material. ftp **sunsite.unc.edu**, path: **/pub/academic/agriculture/sustainable_agriculture/beekeeping**. Mailing list at **bee-l@albnyvm1.bitnet**. Subscription address: **listserv@albnyvm1.bitnet**.

HUBBLE TELESCOPE - USENET News Group **sci.astro.hubble**

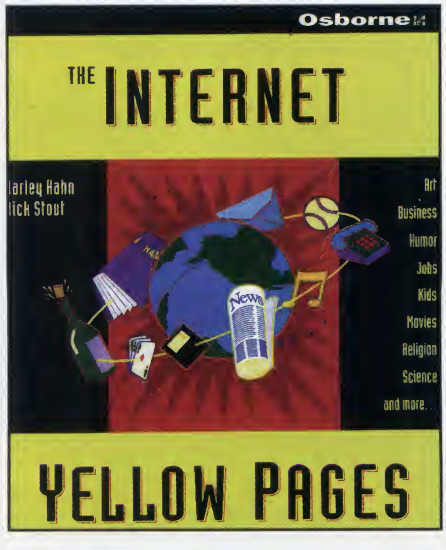
BEAVIS AND BUTTHEAD'S MAILING ADDRESS - beavis@mtv.com - butthead@mtv.com

PANTYHOSE - ftp **alycia.andrew.cmu.edu** path: **/pub/graphics/over_age_18_only/hosiery/**. There is also a newsgroup: **alt.pantyhose**.

E-MAIL ADDRESSES FOR UKRANIAN BUSINESS - ftp **kekule.osc.ed** path: **/pub/russian/business/ukraine/commercial.directory**

SMITHSONIAN PHOTOGRAPHS - gopher to pipeline.com

ECONOMIC BULLETIN BOARD - U.S. Department of Commerce economic data. Telnet **ebb.stat-usa.gov**. Login: **guest**.



MEAD RECIPES ftp **ftp.spies.com**. Path: **/Library/Article/Food/mead.rcp**
BONSAI MAILING LIST - List address: **bonsai@waynest1.bitnet**. Subscriptions: **listserv@waynest1.bitnet**.

PALINDROMES. Palindromes are words and phrases that read the same forward or backward such as "a man, a plan, a canal, Panama." Large list of thousands of these from **ftp.spies.com** - path: **/Library/Article/Language/palindro.txt**

TOM SAWYER - complete text of Mark Twain's Tom Sawyer. **ftp nic.funet.fi** path: **/pub/doc/literary/etext/sawyer.mt**

PI TO 1.25 MILLION DIGITS - The first 1.25 million digits of pi. ftp **wuarchive.wustl.edu path: /doc/misc/pi/**

DAVID LETTERMAN'S TOP 10 LISTS- ftp **quartz.rutgers.edu** path:**/pub/tv+movies/letterman/top-ten**

AMTRAK TRAINS- List of trains including numbers, names, originations, destinations, and days of service. ftp **ftp.spies.com /Library/Document/amtrak.lis**

The majority of entries are simply descriptions of USENET news groups, and we noted the absence of any number of famous telnet, finger, ftp, and gopher services that should probably be in here. But the listings were humorous, and to break up what would be interminable text, the book is full of little pseudo-display-ads for various services that very much resemble those in the more familiar Yellow Pages. The result is entertaining and useful. **The Internet Yellow Pages**, 560 pages, $27.95, ISBN: 0-07-881994-6; Osborne-McGraw/Hill, 2600 Tenth Street, Berkeley, CA 94710;**(800)227-0900** voice.

CHAMELEON - TCP/IP FOR DOS

There is little disagreement, even from the hard core Internauts, that for the great unwashed masses an interface somewhere beyond the Korne shell command line is necessary if the world is to join the Internet party en masse. We think that for a wide majority of the 14.5 million callers dialing bulletin boards in North America, they will take one look at what is available and leave a message to their

favorite local BBS operator inquiring as to when he/she is going to take care of it FOR them. These inquiries are of the nature "why can't you just add telnet to the Utilities menu?"

But there is an alternate view. It revolves around development of platform tools for DOS and Macintosh and whatever else, to make a direct TCP/IP connection to the Internet easy. This approach has some undeniable merit, as it can produce a quicker move to really interesting things like the MOSAIC program to access World Wide Web that we reviewed last issue, Gopher clients, SMTP and POP mail agents, and so forth.

The problem is that few individual grass-roots callers are actually on an Internet connected LAN anywhere, and certainly not from home. They essentially must install TCP/IP, which they know not from dog enemas, and link it to a host provider using Serial Line Internet Protocol (SLIP) or Point to Point Protocol (PPP), which they likewise know not from dog enemas, via modem. SLIP connections are at this point not free, in many areas a little pricey (typically $50 to $250 per month), and in some areas not at all available.

Where they are available, and for those few power users willing to cough the cash to get one, these software tools are still in their infancy. And installation is non-trivial. FTP Software has a serviceable TCP/IP stack for DOS - a little pricey and probably uninstallable by mere mortals frankly. It comes in a green binder fully a foot thick and unreadable.

Phil Karnes has done a thoroughly fascinating piece of software titled KA9Q, originally for packet radio TCP/IP but long grown to wider use, that really is a striking piece of work. It is free for non-commercial use and actually works in quite an amazing way. Several companies have taken this, hacked at it a bit, and cobbled together little modem/routers that are doing pretty well. And likewise several dozen computer science whizoids have indeed been able to install KA9Q AND get it working AND knew what it was for then. There is no readable documentation, and the actual development of this software over the past few years has been by committee. After fooling with it for several days, we went to San Francisco and Tom Jennings coached us on the software, gave us his configuration on disk, and we STILL didn't get much done with it. Though actually, we do have something up and running and play with this fascinating, if frustrating software to this day.

But we recently came into possession of a piece of software titled Chameleon from NetManage, Inc. of Cupertino California. It isn't flawless, but it's the first pass we've seen at a TCP/IP stack implementation and application suite for the Windows platform that is actually packaged for and installable by humanoids.

The basic premise of Chameleon is that you can put the TCP/IP stack in a **Windows Dynamic Link Library (DLL)**. You can interface to the Internet either through a LAN card, if your LAN is connected to the Internet, or via modem SLIP dialup connection to an Internet host provider. Windows applications for ftp, telnet, mail, and so forth are designed to "plug in" to the WINSOCK.DLL and in fact, this Windows Sockets concept, borrowed from the Berkeley Sockets program interface in the UNIX world, has become something of an embryonic standard. As a result, you can even plug in programs by other vendors into the Chameleon **WINSOCK.DLL** and in fact, we did use Chameleon with the NCSA MOSAIC for Windows application reviewed last issue.

The package comes in an encouragingly small 6 X 8-inch plastic case. The installation and users guide is professionally printed and not overwhelming at 150 pages. And the software itself comes on two 1.44 MB diskettes.

There are some very foreign concepts you have to master to accomplish installation and you need some information before you even start. This may be a little discouraging, but it goes to the heart of how Internet Protocol is designed and you will face it if you do TCP/IP however you do it. You must know YOUR internet IP address in numeric form, and you must know your host's internet IP address in numeric form. This will look something like 156.27.1.51. This information must come from your host provider. You also need to know your host name and your domain name. Your host name is the UNIX name of your machine. It can be anything, but is typically less than 8 characters. Your domain name is something like **@boardwatch.com**.

You do have to develop a logon script. This is a simple set of send/expect sequences designed to dial up your host and login. Novices from the DOS world nearly always read too much into this, and attempt to get the script to do any number of things it doesn't need to do. The *only purpose of* the script is to get past the system login and to the prompt where the host knows who you are and that you are doing a SLIP link. All operation past that is quite automatic and the script plays no role in it at all from that point.

The documentation was quite obscure in the area of default gateway and domain name server address. The gateway is the IP address where you are connected to the Internet. Typically, if you get service from a host provider, you will have one IP address and your gateway will have a very different one. There is a pretty serious glitch in the Chameleon software that doesn't really accommodate this. Our gateway is actually 128.138.213.20, and our assigned IP address is 192.94.50.96. This simply doesn't work with Chameleon. We did find their customer support very helpful if not a fountain of information. They told us to change the default gateway to 192.94.50.254 and we would be fine. We're fine. A little confused, but fine.

The domain name server address, though glossed over in the manual, is actually quite important as well. If you want to telnet or ftp to a site, you can enter the address as **telnet 198.211.187.1** for example. But nobody wants to do this. They would much rather **telnet boardwatch.com** using the domain name. This must be translated to the numeric address in order to accomplish the connection. You can set up a local lookup table listing names and IP addresses. But then you must have the numeric address for every place you ever want to connect. If you designate a domain server address on your host, your system will simply send an inquiry to the name server asking for the IP address, and the server will send it back.

The program does include a telnet application with VT terminal emulation, a TN 3270 terminal emulator for connecting to IBM mainframes, file transfer protocol (FTP) client and server, electronic mail, ping, whois, finger, and NEWTNEWS, a USENET news group reader. So with Chameleon, you have the basic toolkit necessary to play on the Internet in a pretty capable fashion.

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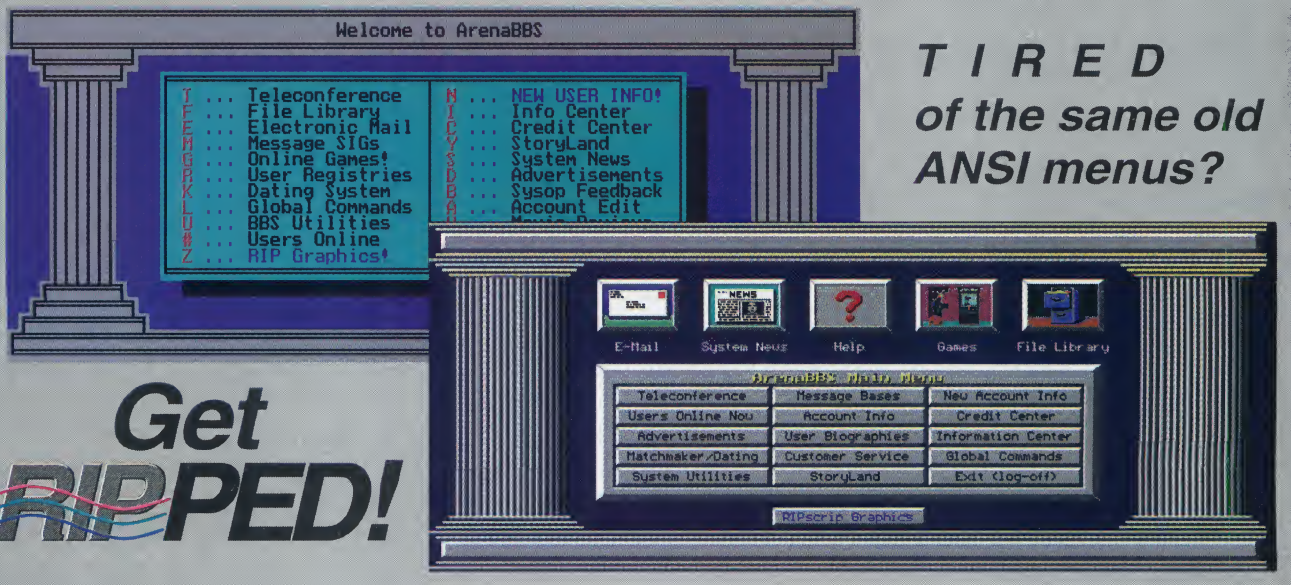

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RIP*scrip* Graphics are supported by these bulletin board systems:

The Major BBS (Galacticomm)	PCBoard (Clark Development)	Synchronet (Digital Dynamics)
NovaLink Professional (ResNova)	Remote Access (Wantree)	TBBS/TDBS (eSoft)
Osiris XLT (Int'l TeleCom)	Searchlight (Searchlight Software)	Wildcat! (Mustang Software)

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The program does have some basic routing capabilities allowing you to be the gateway to other machines and subnets. It does not have quite the capability of KA9Q in this respect, but it does have it.

The latest version also supports Point to Point Protocol (PPP) and 115 kbps serial port connections.

Overall, we found the program to be the most installable TCP/IP package we've tried, and the Windows interface for telnet, ftp, ping, etc. is good. That said, it is a program for power users, and the casually interested are not going to enjoy this. The company is extremely proud in pricing this product at $400 - a simply inexcusable pricing move for the function it fills. But if you want to play with SLIP TCP/IP, and have a reliable WINSOCK for other applications you may encounter for Internet use, it works well, and it is a much easier route to go than trying to figure out KA9Q by trial and error. **NetManage, Inc.**, 20823 Stevens Creek Blvd., Cupertino, CA 95014; **(408)973-7171** voice; **(408)257-6405** fax

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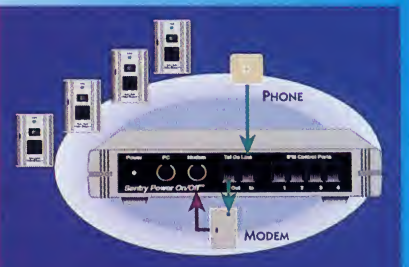

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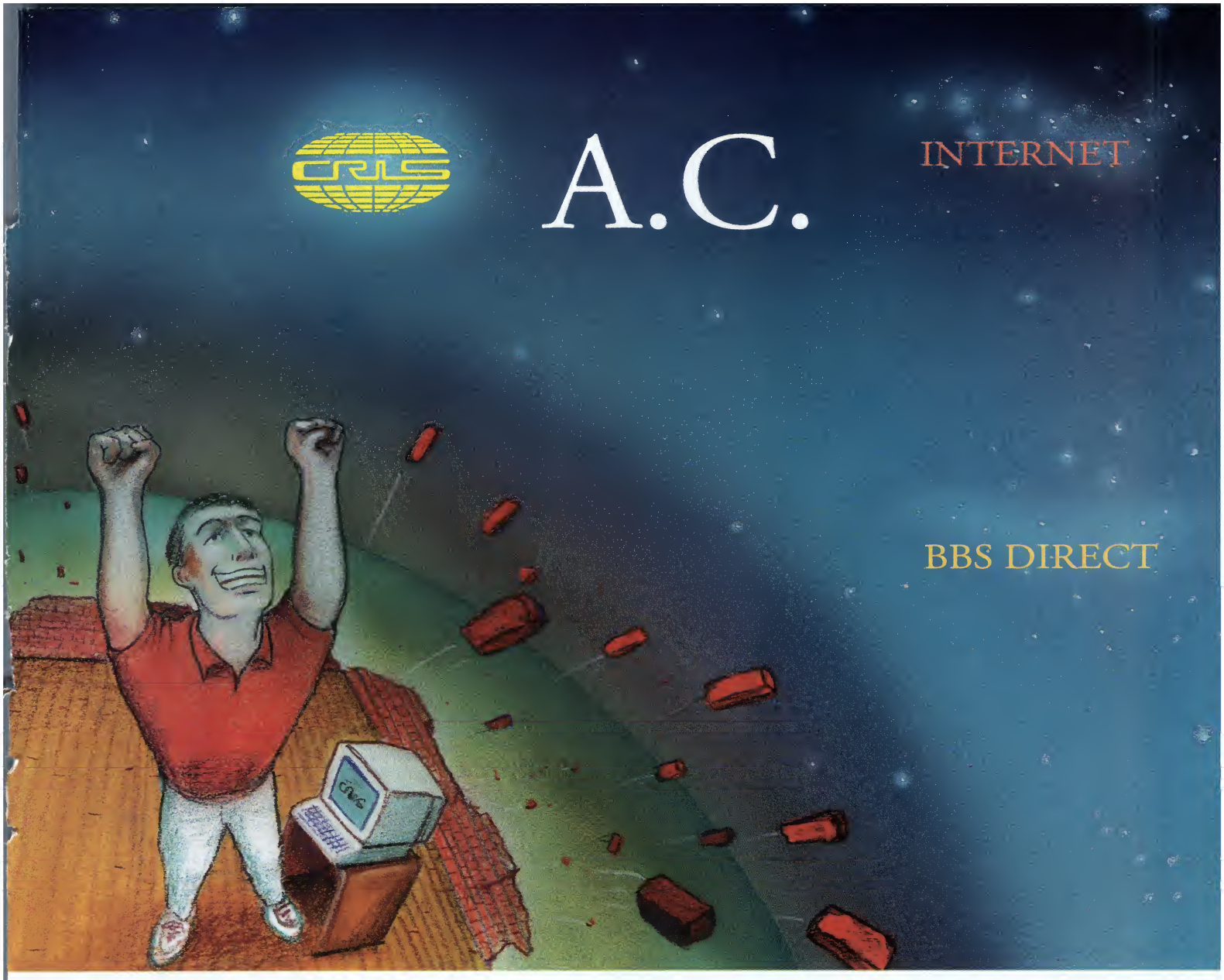

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Voice# (313)998-6103 — $2 hour non prime time
Fax# (313)998-6105 — $175 registration
(internet) info@cic.net

Clark Internet Services — $30 month; $264 annual; $25 registration
10600 Route 108
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Voice# (800)735-2258
(Maryland Relay Service)
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Fax# (410)730-9765
Data# (410)730-9786
(internet) info@clark.net

CNS Internet Express — $10 monthly minimum; $2.75 hour; $8.00 hour 800 service; $35.00 registration
1155 Kelly Johnson Blvd.
Suite 400
Colorado Springs, CO 80920
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Fax# (313)747-3185
(internet) info@merit.edu

MIDnet — $60 month; $150 registration
501 N Tenth Rm 124
Lincoln, NB 68588
Voice# (402)472-8971
Fax# (402)472-8486
(internet) cfarnham@unl.edu

MRNet — $55 month; $150 registration
511 11th Ave South
Box 212
Minneapolis, MN 55415
Voice# (612)342-2570
Fax# (612)344-1716
(internet) dfazio@mr.net

NETCOM — $25 month low volume mail $45 month news & mail feed. $60 month Telnet & FTP $50 registration
4000 Moorpark Avenue
Suite 209
San Jose, CA 95117
Voice# (408)554-8649
Fax# (408)241-9145
(internet) info@netcom.com

INTERNET UUCP HOST LIST

PANIX
Voice# (212)787-6160
(internet) info@panix.com
$2 hour
$10 month for a user account

PREPnet
305 S Craig Street
2nd Floor
Pittsburgh, PA 15213
Voice# (412)268-7870
Fax# (412)268-7875
(internet) twb+@andrew.cmu.edu
$1,000 year
$325 registration
$40 month maintenance fee

RAIN
Box 2683
Santa Barbara, CA 93120
Voice# (805)899-8610
fax# (805)568-2299
Data# (805)899-8600
(internet) rain@rain.org
$50 month
$200 registration

Spectrum Online Systems Inc
Jim Welch
2860 S Circle Dr
Suite 2202
Colorado Springs, CO 80906
Voice# (719)576-6845
(internet) jimw@sosi.com
$1 hour
$125 monthly cap
no setup fee

The Well
27 Gate 5 Road
Sausalito, CA 94965
Voice# (415)332-4335
Fax# (415)332-1669
(internet) info@well.sf.ca.us
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$1 hour
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UUNET Technologies
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falls Church, VA 22042
Voice# (800)488-6384
fax# (703)204-8001
(internet) info@uunet.uu.net
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$2.60-5.60 hour

XNet
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Lisle, IL 60532
Voice# (708)983-6064
BBS# (708)983-6435
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For a one-time setup fee of $75.00, you can add UUCP and domain name service (DNS) to your HoloNet account.

UUCP service gives your BBS users access to Internet e-mail and USENET conferences. UUCP service can be set-up as soon as the next business day!

Domain name service (DNS) gives your board a custom Internet address similar to "something.com". Domain names take up to 2 weeks to be registered.

An individual HoloNet account is required before adding UUCP and DNS service. All regular HoloNet rates apply.

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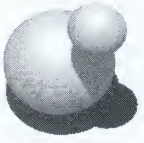
or
send e-mail to info@holonet.net



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TAKIN' IT ON THE ROAD
or
Surviving the Trauma of Traveling with your Laptop

By Jim Thompson
Western News Service

Even under the best of circumstances, working in remote locations offers a number of problems and limitations. Who hasn't suffered headaches, and often heartaches, when trying to make a presentation, get a locked-up computer back at the office running properly or connect a modem to a telephone line or instrument that is as foreign as the country you are visiting.

There are as many frustrating tales of computer problems on the road as there are laptops. Here are a few items that I use and that should help you over almost any rough spot you may encounter.

AVERKEY PLUS SOUND

If you are looking for a low-cost, yet effective system for multi-media presentations, **ADDA Technologies, Inc.** may have just what you need. Their **AVerKey Series** of products provide a portable solution to flicker-free conversion of computer graphics to video. This conversion allows you to display your computer's output on any television or video monitor.

Two versions of the AVerKey products are available, the standard model, which allows for video conversion only and the **AVerKey Plus Sound** model, which adds high quality sound to your portable multimedia mix.

AVerKey takes the digital signal from the VGA output of a computer video board and transforms it into an analog signal that can be understood and interpreted by a television or video monitor.

AVerKey supports resolutions up to VGA (640x480) and 16.7 million colors. The resolution and quality of any video image is limited to the NTSC video standard. "This standard allows for no more than approximately 640x480 sampleable points in video. So, basically, this is the highest resolution you will get from any video," says Arthur Pait, Assistant Manager, Sales and Marketing for ADDA Technologies, Inc.

Actually, there is much more to the story of quality when it comes to video. It is not just resolution that makes an image look good, it is also in pallet depth. An image on television can appear to be clear and crisp even though it is actually not of a very high resolution. Typically, a television picture is only about 300 lines of resolution (in the US the optimum scan resolution for broadcast television is 525 lines).

To the human eye, this "low quality" image looks good because of the pallet depth or variety and richness of the colors. In other words, it is the depth of colors that give the image its rich appearance. AVerKey's ability to display up to 16.7 million colors gives computer images a very rich look.

This small unit (6.3"x4.3"x1.5" or about the size of two cigarette packs laid side-to-side) also has both video and VGA output ports allowing for the simultaneous display on both a computer monitor and a television screen. For video display you can choose between an RCA-type video jack (NTSC Composite Video) and an S-video (4-pin mini-DIN Jack) connector.

The VGA input and output ports are standard VGA Hi-density DB-15 connectors, which allow this unit to be used with either a PC or a Macintosh computer. Mac support includes: LCII, LCIII, Centris 610, 650, 680, Quadra 700, 800, 900, 950 and Powerbooks 160(c) and 180(c).

The sound portion of AVerKey Plus Sound features a Microphone or line input (8/16 data bit format) a built-in speaker, audio jacks for external high fidelity speakers and a master volume control. There are also volume adjustments for the left/right channels, the microphone/line input, Wave format and FM synthesizer via software controls.

Jim Thompson
and his Hat "Marlboro"

The bundled sound software allows you to record, compress and playback your own custom messages, music or sounds. It supports voice annotations in Windows 3.1 applications and MPC Wave file formats.

A few other cute applications are also included. There is an audio reminder with a number of alarms and voice messages. A stop watch which emits an audible "click" as the seconds pass and then announces the elapsed time when it is stopped. There is also a neat talking clock and a talking calculator.

Also bundled with AVerKey is **Action!**, an excellent presentation software package from Macromedia. Action! allows for the integration of still images, text, sound and video into one multimedia presentation. This is a very powerful presentation tool. The inclusion of this product is one more reason why AVerKey is an excellent buy.

Using and installing AVerKey couldn't be easier — plug one end of the supplied video cable to your VGA card and the other into AVerKey. The video cable runs from AVerKey to the television or video monitor. For sound, a cable runs from the parallel port to

AVerKey. Output jacks allow for the attachment of external speakers.

The included software gives you a certain degree of control over the television image, including over/under scan. You will probably want to install this software, but it is not absolutely necessary. Even without software it works just fine.

The one flaw in an otherwise excellent product is that the unit does not run on batteries. This is a serious limitation to a product that is intended for field use. You will need to carry along an AC power adapter and an extension cord, all of which adds extra weight, .

The package includes the AVerKey, software and all necessary cables (RCA video, RCA audio, S-video, VGA and parallel cables).

This is an excellent solution to the problem of demonstrating your BBS to a group.

REMOTE POWER ON/OFF

Even the best BBS or remote control software won't help you if you forgot to power on your computer or if the software crashes. **Server Technology, Inc.**, offers an excellent solution for such problems. **Remote Power On/Off** detects an incoming telephone call and turns on the power to your computer. You can even set the unit to turn off the power when you are finished.

The device can be set to answer after 1, 6, or 12 rings. There is even a "Reboot Mode" which allows for rebooting a locked-up computer, workstation or server. In this mode, if a lock-up occurs, just call in and let the phone ring a pre-set number of times (one or eight rings) and then hang-up. After detecting the hang-up, power to the work station is turned off. Power is re-supplied after a short delay allowing operations to return to normal.

A feature called "on hook delay time" determines the length of time between termination of a call and the powering off of the computer. The delay time can be set to 2, 15 or 60 minutes making it perfect for applications that are configured for call-back operations.

Remote Power On/Off also provides an AUX port mode which allows a modem to share a single phone line with an answer machine or fax machine.

One of the major advantages to Remote Power On/Off is the amount of money it can save you over the course of a year. "It costs about $150 to run a PC 24-hours-a-day for a year. Our product can not only save wear-and-tear on your machine but save you money as well," says Carrel Ewing, President of Server Technology, Inc.

The company also markets a product called Sentry Remote power Manager. This password protected unit can control up to four remote power sources. With this flexibility, a network manager has the ability to perform secure re-boot operations, remotely.

The operation is simple and straightforward. After being verified by the Sentry, the caller is presented with a "power control screen." Through this interface, one can individually control the AC power flow to four computers or work stations. If an

Remote Power On/Off Package

error condition is detected, a re-boot signal can be sent to the individual machine.

Remote Power On/Off comes bundled with **pcANYWHERE for Windows** from **Symantec Corporation**.

According to Carrell Ewing, the company is also offering a special discount on all their products to Sysops. For more details call Server Technology, Inc.

These are both excellent products which provide not only a savings in power consumption but also a good deal of peace-of-mind.

MAKING THE CONNECTION

Making connections on the road is not always easy. Who hasn't had to resort to unplugging telephones, creative use of alligator connectors, and even moving furniture and unscrewing wall jacks to get to the telephone line so a modem connection can be made. Here are two products that may eliminate most of the problems and provide protection for your expensive equipment.

TELE-TRAVELKIT INTERNATIONAL

When it comes to making a connection to virtually any phone system, even in the most far-flung corners of the world, there is no better package than the **Road Warrior Tele-TravelKit International** from **Computer Products Plus**.

This is one of the greatest collections of gadgets and connectors I have ever seen. Inside the neat zippered case is a treasure trove of "wish-you-had it" items that will make it possible to connect your laptop to even the most exotic telephone line.

The included **Telecoupler II** high speed modem coupler is the best such device I have found. This 9.2 ounce gadget attaches to most any telephone handset with a velcro strap. The attached cable plugs into your modem or fax machine allowing for transfer speeds of up to 14,400 bps.

Power to the unit is supplied by a 9-volt battery which, under normal use, will last for nearly 50 hours. A LED (light emitting diode) alerts you when the battery is getting low.

Rubber cups on each end of the Telecoupler II mate with the earpiece and mouthpiece of the handset. The movable cups seem to match up with any style of telephone. There is even a special adapter for attaching to the small triangular shape of an AT&T Merlin telephone. The small rubber

The Road Warrior Tele-TravelKit International

pads on the back of the coupler reduce vibration and help filter out extraneous noise. A built-in level switch allows the Telecoupler II to adapt to varying line conditions.

If the signal level of the line is too low or too high, there is a level switch which will increase or decrease volume to and from your fax machine or modem.

In addition to the acoustic coupler, The Tele-TravelKit International includes a printer cable, modular line cord, and power plug adapters for the U.S., Great Britain, Africa, Hong Kong, Europe, Middle East, South America and Australia. You will also find telephone adapters for France, German "N" and "F" types, Holland, Sweden and the United Kingdom.

Computer Products Plus also includes a number of US telephone adapters (remember the old four-prong plugs?) that will have you hooked into any phone system you are likely to encounter. You will even find a screwdriver and a magnifier/flashlight in the convenient travel case.

If you do any traveling out of the country, and expect to use your laptop, you definitely need the Tele-TravelKit International.

KONEXX KONNECTOR MODEL 112

This device from **Unlimited Systems Corporation, Inc.** lets you easily connect your computer modem or fax machine to digital, PBX, multiline or hotel telephone system.

The **KONEXX Model 112** connects to the handset jack on the telephone. It's simple to use, just unplug the handset and plug in the Model 112. The handset is plugged into the KONEXX which also provides a standard RJ-11 jack for your modem and auto switching between voice and data.

The device, which is about the size of a package of cigarettes, is simple to use and works with just about every telephone system you are likely to encounter in the U.S. A four-position slide switch compensates for volume differences encountered with various telephone and PBX systems. A 9-volt battery powers the unit for up to 30 hours.

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The KONEXX Model 112 provides connections up to 19.2 Kkps. Such high speeds, however, will only be achieved if the line is clear. Tests at various hotel rooms yielded mixed results. In some cases, I had no problems with a 14,400 bps connection, in other cases, I had to drop the speed all the way down to 1200 baud to get a noise-free connection. But this was a problem with the quality of the line and telephone system not the KONEXX unit.

Aside from convenience, the best reason for buying The KONEXX 112 or an acoustic coupler is the protection factor. "We get calls every day from people who plug their modems into a

Konexx Konnector Model 112

PBX system in either a hotel or office only to find that their modem was burned out," says Howard Gutzman Vice President of Unlimited Systems Corporation, Inc.

"The reason for the burn outs is that the PBX system supplies the voltage for the telephone. Often the current from this system is too powerful and burns out the modem coil," adds Gutzman.

With modems costing up to $600, a burn out can be costly.

[Jim Thompson is Managing Editor of Western News Service in Los Angeles, California. He also manages the Marlboro Racing News BBS. CompuServe: 72777,2677; MCI Mail: 321-4127 - Editor]

CONTACTS:

AVERKEY
ADDA Technologies, Inc.
48501 Warm Springs Blvd.
Suite 109
Fremont, California 94539
(800) 863-ADDA
(510) 770-9899
COST: AVerKey Plus Sound: $449
AVerKey: $299 (Same as AVerKey but without sound capabilities)
(Both Units include all needed cables and connectors)

REMOTE POWER ON/OFF
Server Technology, Inc.
1288 Hammerwood Avenue
Sunnyvale, CA 94089
(800) 835-1515
(408) 745-0300
COST: Remote Power On/OFF with AUX: $169.00
Remote Power On/Off (Mac version): $199.95
Sentry Remote Power Manager: $349.99

TELE-TRAVELKIT INTERNATIONAL
16351 Gothard Street
Huntington Beach, CA 92647
(800) 274-4277
(714) 847-1799
COST: $279.95

KONEXX CONNECTOR MODEL 112
Computer Products plus
Unlimited Systems Corporation, Inc.
8586 Miramar Place
San Diego, CA 92121
(619) 622-1400
COST: $149 (includes 9-volt battery and AC-Adapter)

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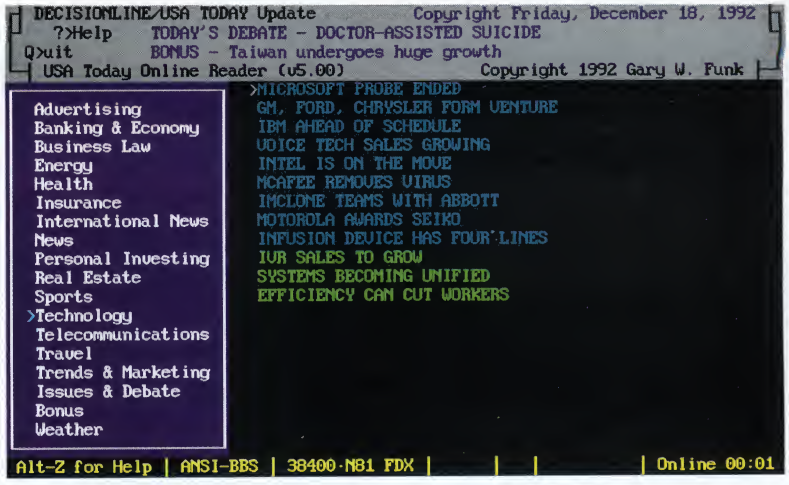

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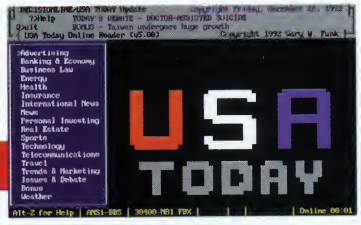

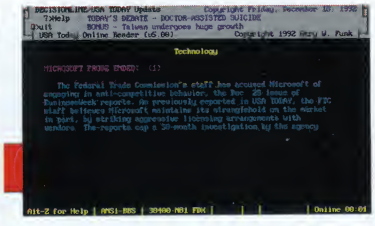

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Here it is!

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"It's MY book - it stays on MY desk, and the rest of you guys keep your cotton pickin hands off it."

That's how it started. The fight ended with a copy of Tom Glover's Pocket PCRef on EVERYBODY's desk at Boardwatch, but they still tended to "travel" a bit. So we decided to order a few CASES of them and offer them to our readers.
Why did this little book cause such a stir? First, it has a very simple thing going for it. It's a little bitty book - pocket sized. We don't actually carry them around in our pocket ,but it can sit on the desk without taking much space ,you can drop it into a briefcase and again, it's almost not there. But authors Tom Glover and Millie Young have piled more tabular information on personal computers into this little book than anything like it we've found. It's the kind of information you only need once in awhile (couple times daily around here), but when you need it - you need it pretty badly - and preferably without a search through the lost ruins of Egypt in the back room. In 496 pages -

DOS Command reference - all of them through version 6.0 - some 200 pages.
DOS History - release dates, file sizes, the works.
PC Industry Phone Book - a little over 3500 telephone numbers of companies prominent in the personal computer industry. That gets thumbed a bit.

Hard Disk Configuration Data - ever lose your CMOS? You're hard disk disappears. All your data is there, and you can easily get it back, if you can just remember how many heads, how many cylinders, how many sectors per track, a little info on the landing zone, etc. Rub a lamp. This little book lists 2300 different drives with exactly the info you need to get back up in seconds.

- ***Hayes AT modem command set - all of it.***
- ***Keyboard scan codes - all of them.***
- ***Port and Cable pinouts for parallel printers***
- ***Hardware Interrupts and I/O maps.***
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- ***Address Maps***
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- ***Error codes***
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- ***Video Scan Frequencies***
- ***Pinouts for everything in your PC.***

Jack Rickard

Plus product support bulletin board lists and in this 3rd addition, we talked them into including the Boardwatch Magazine Reader's Choice top 100 Bulletin Board list. This isn't light reading, it's not a "how-to" book. It's a little (3.2 X 5.4 X 0.6) reference book with hundreds of little tables of information, phone numbers, and conversion tables. The kind of information you only need when you need it, and then you usually can't find it - or if you can, it's buried in some monster manual full of somebodies theory of how the computer industry ought to be. With this midget lookup book, you can quickly lookup the thing you need to know now. Send me $15.95 - I'll send you one of your own. And yeah, I suppose you could carry it around in your pocket if you want.

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IF YOU HAD THREE WISHES,

Take a close look and you'll see why so many sysops are switching to the Synchronet Multinode Bulletin Board System. For one, message networking is second nature for Synchronet. Not only does Synchronet support FidoNet, QWK, and PostLink (RIME) message networks, but network considerations are integrated into every aspect of the BBS. Synchronet's hierarchical message and file areas are the perfect organizational solution for today's multi-network message and CD-ROM file areas. Synchronet has many built in features that other packages either don't offer or require an add on, such as multichannel and private key by key chat, offline reader features, and multiuser CD-ROM support. First time operators appreciate Synchronet's elegant menu driven configuration, while experienced sysops revel in its wealth of options and flexibility. The list goes on and on. But don't take our word for it, check out the competition first. With Synchronet, you won't need three wishes.

Feature and Price Comparison for an 8 node BBS on a single 486 PC

	Synchronet	Wildcat!IM	PCBoard/M	MajorBBS	TBBS
Node license	$199	$799	$440	$508	$895
Multitasker	$200	$200	$200	Yes	Yes
8 port I/O	$300	$800	$995	$575	$500
Multinode chat	Yes	Yes	Yes	Yes	Yes
Multichannel chat	Yes	Extra	No	Yes	Yes
Private key by key chat	Yes	No	No	Yes	Yes
Offline reader support	Yes	Yes	Extra	$199	$99
QWK networking	Yes	Yes	Extra	No	Yes
FidoNet import/export	Yes	Yes	Yes	Yes	Yes
Send/receive NetMail	Yes	Yes	No	No	Yes
PostLink (RIME) support	Yes	Extra	Yes	Extra	No
RIPscrip GUI support	Yes	No	No	Extra	No
Novell/DOS LAN support	Yes	Yes	Yes	Yes	No
976/900 billing support	Yes	No	No	Extra	Extra
Real-time node activity alerts	Yes	No	No	Yes	Yes
Enhanced CD-ROM support	Yes	Yes	Yes	Extra	Extra
Multiuser SDK	Yes	No	Extra	Extra	Extra
Incoming FAX support	Yes	No	No	No	No
Chat between doors	Yes	No	No	Yes	No
Bidirectional file transfers	Yes	Yes	Yes	No	No
Multiple user command sets	Yes	No	No	No	No
Supports DOS doors	6 types	1 type	3 types	No	No
Hierarchical msg & file areas	Yes	No	No	No	No
External transfer protocols	Yes	Yes	Yes	No	No
Total price	**$699**	**$1799**	**$1635**	**$1282**	**$1494**

Prices do not include CPU or modems. Features and prices compiled from vendor supplied information 2/93, are subject to change without notification. Wildcat!IM, PCBoard/M, MajorBBS, TBBS, QWK, FidoNet, PostLink, RIME, RIPscrip, Novell, and DOS are trademarks or their respective companies. Commercial or Shareware Toss/Scan utilities are required for some message network technologies.

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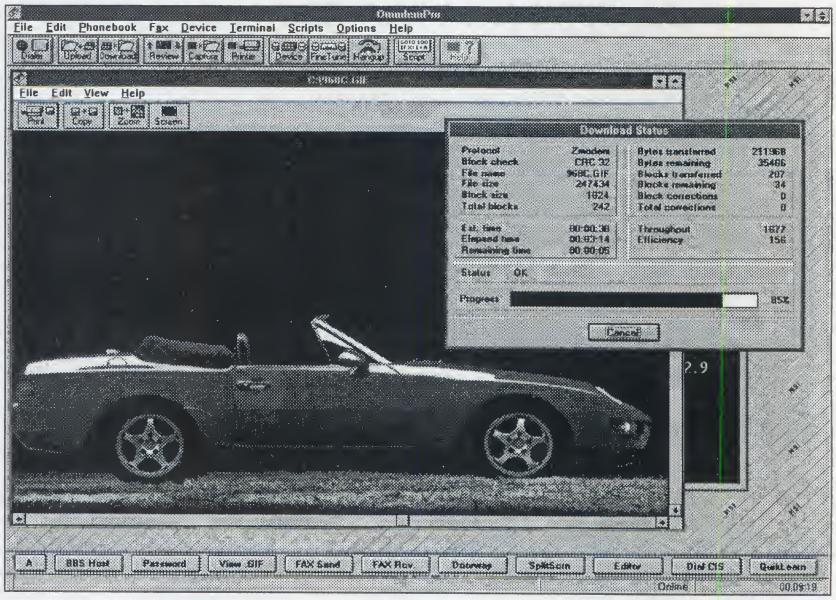

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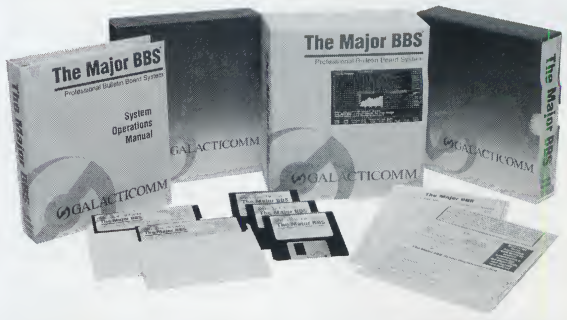

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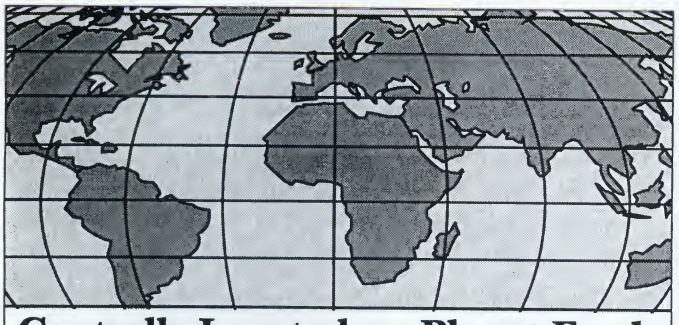

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CocoNet	Coconut Computing, Inc	619-456-2002		619-456-0815	UNIX	1000	-	OS	Y	N	I	N	N	Y	$18,995	$395
DLG Professional	Telepro Technologies	403-341-7826	403-341-7826	403-347-3262	AMIGA	Unlim	29	OS	N	I	3	3	N	Y	$299	$299
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FirstClass	SoftArc, Inc	416-299-4723	416-754-1856	416-609-2250	MAC	100	22	OS	Y	3	O	N	I	Y	$3450	$95
GAP	GAP Development Co	714-496-3774	714-496-3774	714-493-3819	DOS	100	16	DV	Y	3	3	I	Y	Y	$359	$79
Hermes II	Computer Classifieds	206-643-2316	206-643-7830	206-643-2874	MAC	10	10	OS	Y	3	3	N	N	Y	$95	$95
hi-BBS	XBR Communication	514-489-1001	514-489-4966	514-489-0445	MAC	130	?	OS	Y	N	O	N	N	Y	$3,400	$70
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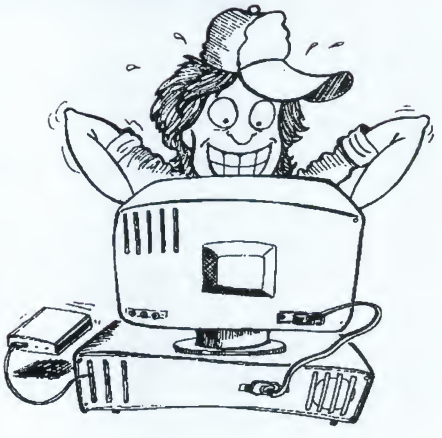

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Freedom of Speech Under Fire

by Lance Rose

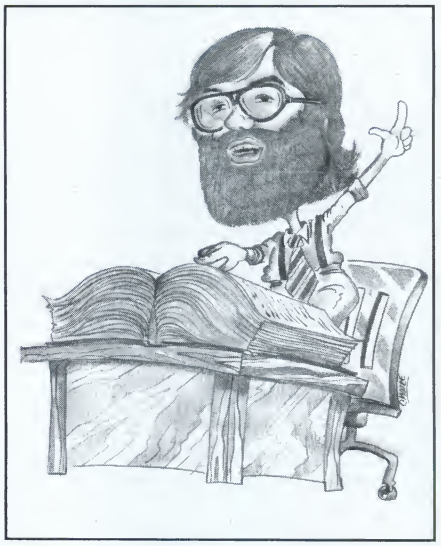
In the United States, freedom of speech and of the press are guaranteed by law. The 1st Amendment to the Constitution states, "Congress shall make no law . . . abridging freedom of speech, or of the press." As long as this principle holds, the people of the United States can question their existing leadership and discuss alternatives without fear of being silenced.

The First Amendment has been upheld most purely in the realm of print publishing, especially newspapers as the traditional forum of public opinion. Broadcast media fared far less well, being regulated from the very beginning by the Federal Communications Commission. The rationale for regulation was that in the early days of radio, neighboring broadcasters competing for the same frequencies caused such interference that it was difficult for any of them to be heard by the audience. The FCC was created to prevent such interference and promote an orderly allocation of broadcast frequencies. Many feel that over the decades, FCC regulation has descended a slippery slope leading away from speech freedom. After starting merely allocating bandwidth, it branched out to regulate the content of broadcasts to assure proper use of the airwaves, then extended its reach to cable and other transmission technologies where its limited-bandwidth basis for regulation does not even apply.

As the publishing and broadcasting industries begin delivering their products on the computer networks, a major question is which tradition will prevail: the great respect accorded freedom of speech for the print media, or the regulated environment of the broadcast media? It is too early to tell amid all the intense jockeying by multinational corporations for control of the networks. In a few years after the dust settles, it will be clear whether regulation is needed or desirable, and if so, whether government has the will or power to impose it.

Perhaps a whole new meaning for freedom of speech under the 1st Amendment will develop, unique to the network environment. Computer networks provide new opportunities for speech. Millions of people already interact easily with others across the nation and the world. Anyone can start his or her own electronic newsletter, Usenet newsgroup, mailing list, Internet node or computer bulletin board, and thus become an electronic publisher in his or her own right. You can participate without revealing your gender, race or age, so your ideas can flow with less hindrance by pointless prejudice. The level of connectedness within and among communities, states and nations is far higher than ever before, and may lead to higher and better levels of democracy. If the 1st Amendment can protect and promote such developments on the networks, it will serve a most valuable purpose.

Unfortunately, the 1st Amendment online is not entirely healthy today. The most common and well-publicized problem has been a rash of government raids on computer bulletin boards for various real or imagined illegalities. The common theme is the authorities' disregard for legal restraints on their conduct — seize first, figure out later whether it was justified.



If a bunch of printing presses were closed down around the country by government agents, there would be an enormous outcry. But when an online service is shut down, barely an eyebrow is raised. The raids on Tony Davis' BBS in Oklahoma City by the local police, and on Rusty and Edies' BBS by the FBI, while well-known among BBS devotees, are mere esoterica to everyone else.

The scary thing is that the BBS raids just scratch the surface of the many encroachments on online freedom of speech. Online services just aren't getting much respect. The following situations show different facets of the ongoing attack on free speech on the networks.

Gregory Steshenko and the Freedom to Flame

Gregory Steshenko, a graduate student in electrical engineering at the University of Texas in Dallas, participated vigorously in Internet discussions. Apparently too vigorously. He made pointed comments and supposedly personal verbal attacks in discussions of Russian and Ukranian politics while employed by Microsoft and using its Internet account. This resulted in many complaints to the company, and eventually lost him his job. Not to be deterred, he picked up the discussions and flames again using his student Internet account at University of Texas, resulting in more complaints. His access to the Internet as a UT student was terminated this time, though they let him remain as a student. He then started a lawsuit against the University for violating his First Amendment rights, which continues as this column is written.

The basis for Steshenko's lawsuit is that the University of Texas receives a fair bit of funding from the U.S. government, making it far different from a private system operator or system administrator. Private sysops or sysadmins can kick any user off their system just for sneezing the wrong way, but the government is prohibited from restricting freedom of speech. It would be illegal for the government to censor a single message, yet here the University of Texas censored on a far grander scale, entirely cutting off Mr. Steshenko's government-provided access to the net. How can they get away with it? Sure, Steshenko is kind of a nasty guy, but there's no "nasty guy" exception written into the 1st Amendment.

The University raised a number of points in its behalf, as reported in the Dallas Morning News. First, that schools are

permitted some relief from the First Amendment where necessary to meet their educational objectives. This rationale was used in the past to justify school control of student newspapers. Second, that a student Internet account is a school resource, and they are not obligated to give Mr. Steshenko access to that resource if he misuses it. And third, that Mr. Steshenko's access to the Internet was not cut off, since he could always buy a personal account from an outside service. All he lost was the school freebie. These arguments are worth considering, but they're not conclusive.

A government-supported school does not have a blanket license to censor student speech. For example, if it starts a newspaper under a free speech policy, the school can't change that policy in midstream to censor a statement it doesn't like, as pointed out by student free speech advocate Carl Kadie. When the educational excuse for censorship becomes unclear, the 1st Amendment steps in once again to protect free speech. In Mr. Steshenko's case, that educational excuse is extremely hard to find. He was not causing any student unrest. In fact, he posted to areas having little or nothing to do with the school.

The argument that an Internet account is only a "resource" and can be shut down with no 1st Amendment consequences does not bear up under a closer look. It is as silly as saying the government could sideline all newspaper delivery trucks because they are just "resources" for delivering a newspaper. Whether Mr. Steshenko could have arranged alternate Internet access is beside the point. If a school can threaten to shut off the Internet account of any student whose speech it doesn't like, this would cause a general chilling effect on the speech of all students. How many people would volunteer their outspoken opinions online if the response is not just contrary opinions, but having their account shut down?

It may be that the University of Texas is really a pretty decent place that just overreacted in Mr. Steshenko's case. That would be easy enough to do, as it seems he did little to endear himself to his sparring partners. One of his more charming traits was complaining to the employers of those on the Internet who hotly disagreed with him, making them fear for their jobs. One can only imagine the resulting complaint letters about Steshenko to the University. But that's really the point of the 1st Amendment: it exists mainly to protect the speech we don't particularly want to hear. And so, it exists for people like Gregory Steshenko, who continues to litigate the question: do we, or do we not, have the Constitutional right to university-supported flaming on the Internet?

An Encore for CompuServe in Manhattan Federal Court

CompuServe is developing a weird habit of getting hauled into federal court in downtown Manhattan. A couple of years ago in the Cubby v. CompuServe case, it was sued for making a supposedly libelous newsletter available on its online service. CompuServe was held not responsible for any libel that may have been in the newsletter, a decision that broke important 1st amendment ground. CompuServe was only a distributor of the newsletter, and had no legal duty to monitor all the materials it distributed.

The music industry is requesting an encore from CompuServe. On November 29, 1993, the Harry Fox Agency ("HFA") and its parent organization the National Music Publishers Association ("NMPA") sued CompuServe in the Manhattan district court for unauthorized distribution of some old Righteous Brothers song named Unchained Melody, as well as about 500 other songs owned or licensed by various NMPA members. The suit asks for "millions of dollars in damages for the many willful copyright claims." If CompuServe uses the same law firm as before and raises the same 1st Amendment defense, perhaps it will simply recycle its winning legal briefs from Cubby and save some legal expenses.

That's not a joke, but a serious possibility. The HFA case presents the same exact legal issue presented by the Cubby case: is CompuServe responsible for monitoring the materials moving through its massive distribution system? The fact that the claim is copyright infringement this time, instead of defamation, is irrelevant to CompuServe's 1st Amendment protection. If the 1st Amendment will not tolerate the burden on CompuServe of monitoring all online materials for defamation, then it will not tolerate the burden of monitoring for copyright infringements. There may be a technical copyright infringement by CompuServe, in that it is likely distributing music files without permission like the Harry Fox Agency claims. If so, the court can order the distribution halted. But on the question of money damages, CompuServe was a mere clearinghouse for the files on its system, and should bear no financial responsibility to the music publishers.

In the HFA case as in Cubby, the real question is whether the local manager of the CompuServe forum where the infringing files reside is responsible for that infringement. That manager can raise the same defense as CompuServe: that it only administers a flow of files through the system, and has neither the time or resources to monitor all files individually. It is hard to say what a court would make of that argument. The local manager is one step closer than CompuServe to the illegal activities on the system, and in a better position both to know about them and to do something about them.

So far, however, the Harry Fox Agency doesn't even care whether the local manager on CompuServe is checking the music files — they're only suing CompuServe itself! Perhaps they're trying to make CompuServe the fall guy, so they need go after only one company instead of one hundred every time they think they're being infringed on the CompuServe system. Or perhaps they're playing divide and conquer, trying to drive a wedge between CompuServe and its own managers by forcing CompuServe itself to bring the managers into the lawsuit if it wants the court to recognize its own lack of responsibility for the content of the service. Or perhaps a little of both.

The underlying motivation for this case is not hard to fathom. Music publishers are rushing to get their works online to exploit the profit-making potential of Bill and Als' Information Superhighway. But in surveying the field, they saw that some of their own music was already placed online by others without permission, and moving in substantial quantities. The music publishers may in fact have known about the online activity for years. But they never needed to pay it much heed, because it was in a different world and

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not much money was changing hands in most cases. Now, as they look forward to earning the lion's share of their own future revenues from network-based transactions, the music publishers are clearing out all possible infringers.

If Harry Fox Agency somehow wins this lawsuit, it would be a big blow to 1st amendment rights in the online world. A win would almost necessarily contradict the holding in the Cubby case. Indeed, as a later case in the same court it would practically wipe out the earlier decision. The HFA case could also establish a very unsavory precedent of another sort — the notion that a distributor's 1st Amendment protection from undue monitoring obligations may vary according to the legal wrong being claimed. If it's defamation, the distributor is protected from monitoring, but if it's copyright, the distributor must monitor all materials to make sure they're not infringing. What about viruses, or obscene materials, or credit card numbers, or classified documents, etc.? What if the distributor does not have to monitor under the laws of its home state, but does have to monitor under the laws of the state next door? This is a monster problem with no clear solution.

A single blanket rule under the 1st Amendment, protecting speech distributors from all undue monitoring obligations, would avoid this problem. But separate and differing monitoring obligations based on the particular legal rights involved would plunge sysops into a sticky mess, never knowing if they're monitoring materials enough to meet all the various laws that might apply to them. This mess is what the HFA case seeks to create for sysops. I hope they don't succeed.

[Lance Rose is an attorney practicing high-tech and information law in Montclair, NJ. He can be found on the Internet at **elrose@path.net**, *and on CompuServe at 72230,2044. He is also author of SysLaw, the legal guide for online service providers, available from PC Information Group at* **800-321-8285**. *The themes in this month's column are explored further in Mr. Rose's contributions to the upcoming book* **Internet Unleashed**, *to be unleashed by Sams Publishing in February, 1994 -* Editor*]*

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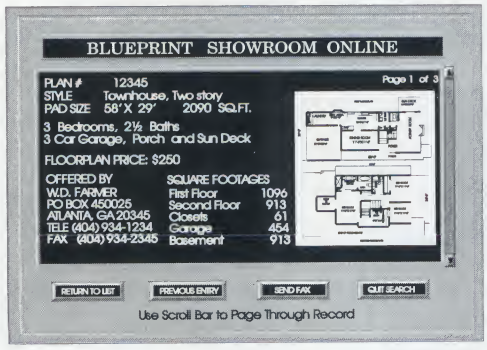

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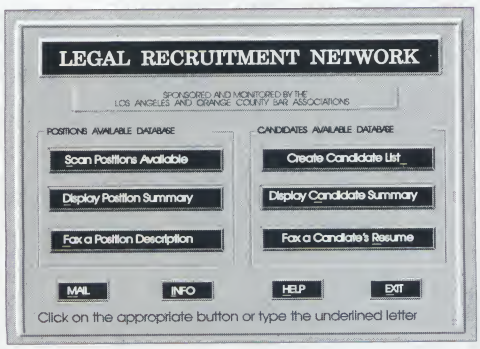

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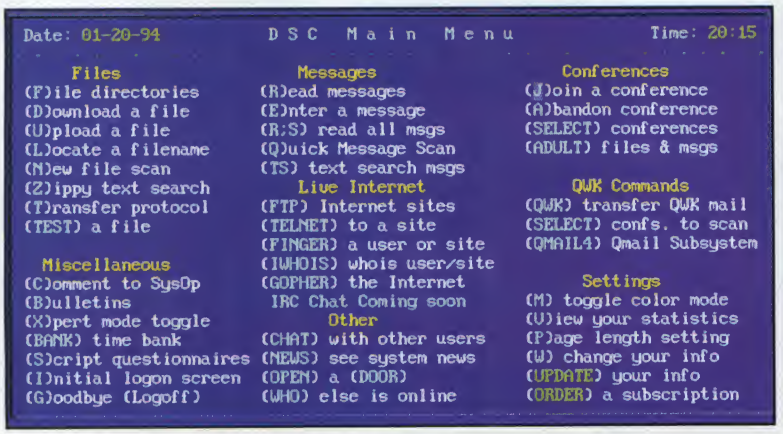
DSC - AMERICA'S ACCESS TO THE INTERNET

by Brian Gallagher

Giving new meaning to the term "Liberty," from the home of the Liberty Bell and Independence Hall, Ron Brandt and Carmen A. DiCamillo are two silicon patriots who have combined their talents to create the largest, and arguably the best, BBS in their region. The BBS sports information and connectivity sure to be the envy of many BBSs for years to come. DSC/VoiceNet bulletin board in Pennsylvania, running PCBoard software, has 10 gigabytes of online files, is satellite connected via Planet Connect, offers full Internet access, along with connections to 13 BBS networks, is ASP approved, and is currently being wired for fiber optics.



DSC Main Menu

Brandt went to night school to learn how to repair computers and worked as an electrical contractor when he purchased an XT computer to computerize his contracting business in 1985. Shortly thereafter he got a modem and within a month he caught modem fever and "it was all over," he said. In October of 1988, Brandt started his first BBS titled Satalink.

The Satalink BBS began as a hobby and soon grew out of hand. His wife, Linda, was in danger of becoming a computer widow in the early days until she started calling BBSs on her own. Although she isn't currently an avid BBSer, she has learned to live with it. Their children, as may be expected, are cyber kids. Jacqueline, 16, uses a computer for word processing; Stephen, 9, received a modem for Christmas and if it's father like son, we can expect a certain Pennsylvania household's phone bill to skyrocket; Lauren, 8, the youngest, just received her first computer this Christmas.

Likewise, DeCamillo's family is also electronically oriented. His wife, Stephanie, is a constant BBSer on the cooking conferences, getting and giving recipes online. Their oldest daughter, Beth, 15, enjoys working with the Internet and was the first in the family to discover MTV's gopher. She also prints up a French news summary via the Internet and takes it to her French class where it is a hit with students and faculty alike. Sarah, 12, the youngest is "still working on it."

DiCamillo began BBSing as a way to collect and distribute shareware files that he had been amassing. As an electrical engineer running his own Voice Mail company producing both software and hardware, he was a natural as a sysop. His first effort was the Datamax BBS which started in October of 1989, a year after Brandt's Satalink. With DiCamillo's plethora of files, and Brandt's network connections the two decided to combine in 1991 and the DSC (Datamax/Satalink Connection) BBS was born. Their goal, then and now, is to create the biggest and best BBS on the north american continent.

When DSC first started it was running 10 lines with 800 to 1,000 paid subscribers. Today there are over 4,700 paid subscribers and that number is going nowhere but up. Business has indeed been brisk for these two entrepreneurs. With over a four fold increase since its inception, DSC accountants have been amazed. "In the last year we have really taken off," DiCamillo said. A big part of what makes DSC so popular is their utilization of new technology and the Internet.

"Every line (all 60 of them) that connects to our system," Brandt said, "can interact with the Internet simultaneously." This is quite a step forward in online communications and was achieved through lots of hard work by the six employees of this full- time BBS. With three UNIX machines, two software engineers, a hardware engineer, and almost $100,000 invested the DSC has achieved some remarkable accomplishments. Among their brighter stars, the DSC tech- wizards have developed their own X.25 pad software, FTP and TELNET software.

Ron Brandt and Carmen A. DiCamillo of DSC

"We have been basically right on the cutting edge of technology," DiCamillo said, "and we're still very user friendly. The average guy on the street can use the Internet from our board." And when that layman "guy on the street" logs onto the Internet via DSC he's getting a lot more bang for his buck than on some other systems. Many BBSs offer only limited Internet access - Internet newsgroups and e-mail, while the DSC offers full connectivity making every user a world - wide pioneer.

As a result of their high- tech Internet connection - services such as the Clarinet Information Service - providing financial, business, agricultural and other interesting information, is also available on the DSC. It is updated continuously in all 250 of its news areas, keeping even the most meticulous and persnickety brokers and money managers as informed as they can be.

For news hounds the DSC is an ocean of information, with practically everything a body could want swimming in its waters. A person can fish for, and catch, Headline News, UPI: General News, Sports and Business, Tech wire news and Finance and Markets news; Newsbytes daily computer news, Canadian broadcast news, local news by state, the San Francisco Bay Area news, and syndicated columns by Dave Barry, Mike Royko, and Miss Manners. Covering a rather broad area of information for every fisherperson with rod and reel.

If this isn't enough to fill your quota for the day, hop onto DSC's full Internet access and reel in real-time access to millions of sites in 40 countries globally, including their governments and universities.

The advanced Internet connection provides DSC users with full Usenet access to over 3,500 newsgroups. The listings range from language conferences such as French, Spanish, Chinese, and Portuguese, to standards like Star Trek and Dr. Who, to downright bizzarre, for example: alien.vampire, lemurs.cooked, fondle.vomit, and the ever popular sounds.armpit. Sounds like they have everything anyone could want and then some. Interestingly enough, the No- Smoking conference didn't seem to garner a really big crowd.

People calling from DSC get Internet access all over the world and thanks to some software wizardry on their end, the world can also get access to DSC via their "reverse ftp" protocol - an in- house creation that is quickly becoming a global hit. With subscribers from all over the world calling in, DiCamillo said reverse ftp is something "our customer base just absolutely sucks up like a sponge."

What reverse ftp does is allow a telnet user connecting from the Internet to select or flag the files they would like to download, and then initiate the download function using normal PCBoard. The system prompts the user for the name of a host system, account name, and password onto which the files will be delivered. Then, DSC automatically initializes an ftp session with the remote host, logs in and begins "putting" the selected files into the root directory of the user at their own Internet site.

Making reverse ftp even more enticing is that it does all of this in a hell of a hurry. An average transfer runs at 3,500 characters per second (cps), and can reach speeds of 7,000 cps, (considerably faster than other protocols on the market), satiating the appetite of even the thirstiest file sucking user sponge. With reverse ftp, a T1 direct Internet line, and over 3,500 callers daily it is no wonder that hundreds of other sysops have contacted DSC wanting their software too. But they aren't giving it out yet, in fact, they are working on getting into "frame relay," another new technology we will be hearing more about in the near future.

The work this full time crew has put into this high- powered board is paying off for them in more than just dollars. Software authors are taking notice of their efforts as well. Being both Association of Shareware Professionals and Association of Shareware Authors and Developers approved many shareware authors post their latest efforts directly to DSC. Some of these include: **FRACTINT**, **WINFRAC**, **TCXL**, and **CILINK**.

The BBSs of tomorrow are looking more and more like Internet mania. And for up and coming *Internauts*, there may be no better board to log onto than the DSC. This board is truly so full of bells and whistles and knobs and buttons - that to push, press, ring and turn them all would be a full time career move.

DSC is somewhat proud of their service - a "basic" membership is $50 per year. Extended time options allow a generous four hours and 6MB daily limit for an additional $45 per year. Adult file access is an additional $25. Access to Internet mail and USENET news will cost you another $45 annually and ftp/telnet adds $120 annually to this service. For a full bevy of services you can total $285 per year (roughly $23.75 per month). This is competitive with other Internet services, but a bit shy of a bargain.

DSC's direct dial modem number is **(215)443- 7390**. You can call **(800)521-2733** voice to get the local access num-

The Heart of the DSC BBS

ber of their X- 25 network. Internauts can telnet directly to dsc.voicenet.com. DSC may also be reached via snail mail: **DSC/VoiceNet**, 17 Richard Road, Ivyland, PA 18974

THE NASHVILLE EXCHANGE

By Brian Gallagher

After building a high power BBS for the nation's home of country bluegrass music, Nashville, Tennessee, through **The Nashville Exchange** or **TNE**, sysop Ben Cunningham saw a greater vision and purpose for his board, and that's when he asked Mayor Phil Bredesen if he would consider making himself available in an online forum. The mayor readily agreed.

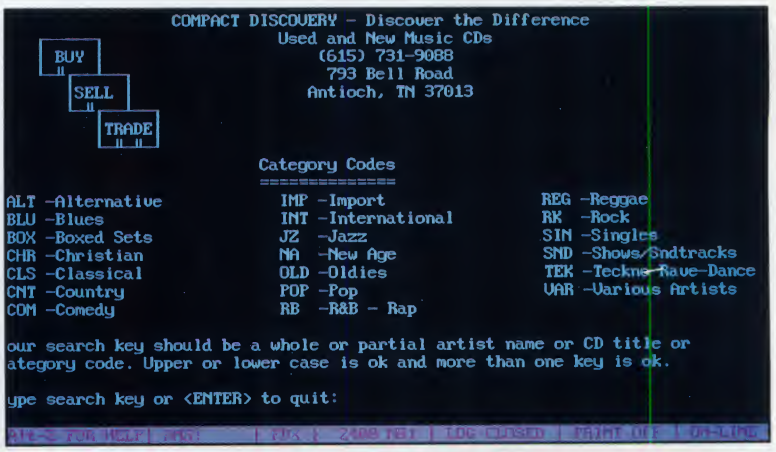
Ben Cunningham of
The Nashville Exchange

Bredesen was a mini and main frame computer programmer long before political aspirations turned the direction of his life to campaigns and community service - fortunately for the citizens of Nashville, his roots stayed with him. He is known to carry an IBM "Think Pad" with him at all times making him a natural for the high tech world of BBSs.

Since he has been online, a small but growing segment of constituents enjoy virtually unlimited access to him as he logs on religiously two or three times a week. Unlike usual government run arounds, nobody gets lost in a paper shuffle online. Bredesen downloads his messages throughout the week and usually formulates replies over the weekend.

The mayor finds the online community to be both articulate and concerned about community affairs. More than once he has been asked by a reporter or talk show host a question he has already answered online. The electronic forum provided by the BBS, he said, leaves him "better prepared to answer questions succinctly and accurately," adding that it gives him more time to formulate a complete answer as opposed to a live interview situation.

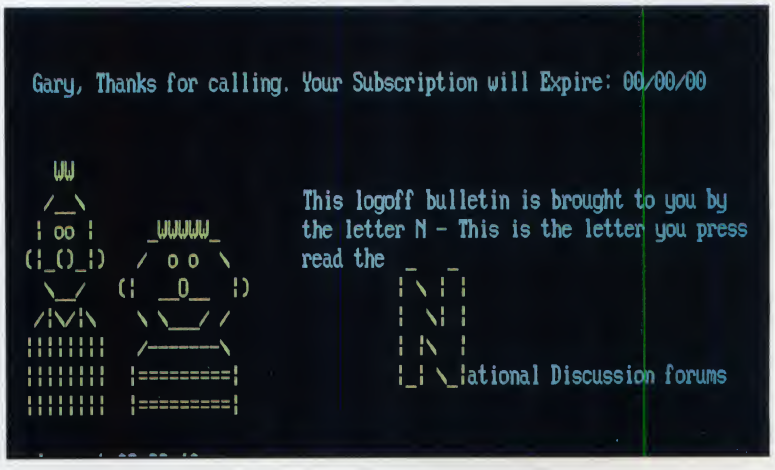
An example of the forum's effectiveness occurred when a user left the mayor a message inquiring about why the flags flying over the Metro Sportsplex were in such bad shape and then found them replaced the next day. Occurrences like this are not all that uncommon since the mayor has gone online. He simply forwards such a message through e-mail to the correct department, or prints it out and mails it to where it needs to go. "(The BBS) is a very handy way to find out about that kind of stuff," Bredesen said.



List of CD-ROM's Screen on TNE

Although he likes the feedback that he has gotten so far from the BBS, he wishes there were more people on it and he has ideas to facilitate just this. He is getting more aggressive in working on making public information data accessible and he has a vision of putting terminals in public places, such as libraries, so that all citizens have access to TNE's forum (which is a free service) and to the Internet as well.

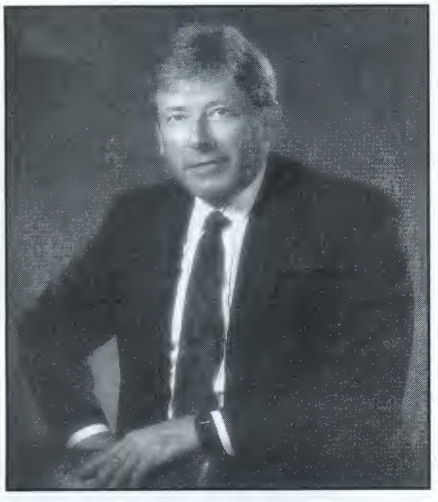
These goals may not be so much pie in the sky as Bredesen is running for governor of Tennessee this November. If indeed he is successful in his bid for governor, you can be sure he won't forget his online acquaintances. Regardless of whether or not he is elected the mayor plans to continue participating in the electronic forum. He said, "I've enjoyed it thoroughly."



The Nashville Exchange Log Off Screen

Another individual who is rapidly becoming a cyber jock is Chief of Police Bob Kirchner. Kirchner, whose wife Beth works with computers for a living and who is also a daily Compuserve user, also agreed to give the online arrangement a shot even though it seemed a bit overwhelming at first. "I'm not computer literate," he said, "I'm not a typist - but I can point a mouse and click."

On the board Kirchner finds out about all sorts of things from poor intersections and potholes, to the conduct of his officers - both good and bad. Many of the questions and comments he fields are of the sort that "you wouldn't normally get," he said. Adding that he finds himself discussing policy and procedure in detail.



Police Chief Bob Kirchner

Kirchner finds himself logging on an average of three times a day - morning, noon, and night, seven days a week. And he doesn't restrict himself to one part of the board. "I read all of it," he said, "I use just about everything on the board." He also logs onto other boards, but is on TNE most of the time. The chief, like the mayor, can see a greater role for BBSs in making his department more effective.

He would like to see an area of the board dedicated to giving descriptions of wanted individuals and method of operations of crimes in the area. Hopefully these additions will find their way onto the board, and hopefully other boards and sysops will do as Cunningham has done and get their public representatives online. For those individuals who find their way onto the cyber wave of the future, Kirchner has a piece of advice. "I think that other Police Chiefs (public officials) should be prepared once they log on - you better reply or be prepared to catch hell." The chief cited a case of where a school board official neglected his replies for two weeks and received a scathing silicon roast.

Besides these high profile representatives many other public officials are taking their first step into the ever-growing world of BBSs. State Representative John Arriola, the director schools for the county and school board members from neighboring counties included. Television and newspaper reporters, radio talk show hosts, publishers and editors have also joined in the fray, making the forum complete and extremely public. (Kirchner notes that discussions between media personalities are sometimes the most heated, and therefore interesting, to watch or participate in).

In fact one the main reasons the response to online officials has done so well is that The Tennessean newspaper wrote an editorial supporting and promoting it. Thanks to Cunningham the little guy in Nashville can voice his opinion and be heard by all of the major players in a community. For the media the situation has turned out to be a real bonus.

Not only are interviews between personalities and politicos set up on line, sometimes they are conducted there too. A television reporter discovered a local gun dealer while on the board and did a story concerning his side of the controversial right to bear arms debate, all because of their online interaction. The participation of community leaders has brought many new users to the already swelling BBS, (with over 1,000 calls daily), and they are getting a lot more than just access to their representatives.

Cunningham said that the mayor was the "key" to the whole thing. People logged on to say their piece, and soon found themselves poking around in other areas of the board - and what a lot there is to look at. With 30 lines, two ISDN lines, some 22 Gigs of files, Internet access, virtually all usenet news groups, a very active classified section and a popular used CD music store; Nashville residents are getting a real bonus from The Nashville Exchange BBS.

Cunningham first got into computers in 1968 when a telex machine in his college dormitory caught his eye. After fiddling with it for a short while he wrote a Tic- Tac- Toe program for his own entertainment. Several years and a masters degree in economics later, he bought a PC to help him in his real estate business by showing prospective buyers what the layout of a particular unit would look like.

Shortly after this he purchased a modem which prompted him to call a bulletin board or two. It was then that "the bug bit," he said, and he has "thoroughly enjoyed it ever since." A year later he set up TNE using eSoft's TBBS because after calling other boards he kept thinking: "I want to do this or that on my board one day." His favorite part of BBSing is the technology - "Being right on the cutting edge all of the time." With cutting edge technology pointing more and more in the direction of the Internet, Cunningham believes that BBSs will be leading the way there.

As TNE and its user base continues to grow, it seems likely that their model of online access not only to public records, but to public officials will also grow. If in fact, Bredesen is elected governor this fall, it will be interesting to see what impact this has on the cyber world. It could very well be a model for explosive BBS use to the nation, and perhaps a precursor of things to come.

The TNE can be reached at **(615)383- 0119**/14.4, or **(615)383-0727**/2,400 or via snail mail: **The Nashville Exchange**, Inc., 2500 Hillsboro Rd., Suite 107; Nashville, TN 37212.

FEBRUARY LISTS

By Brian Gallagher

This month's BBS lists are different from past lists because they have no definitive location or area code - they are spread out across the continent. From Wall Street to Winnipeg, California to Canada, business BBSs are popping up everywhere. One of the first industries to really utilize the online advantage is that of realty. Keeping a small but growing list of real estate BBSs are a husband and wife team from Charlotte, NC.

Co- sysops and newly- weds Jeff and Lana Tucker, not only keep the National List of Real Estate Boards, but they also run **The Real Estate Shop BBS** at **(704)531- 7375**. Jeff, a real estate broker, and Lana, a preschool teacher decided to put their own board up once Jeff realized that BBS software packages could be purchased, (he originally thought that each sysop wrote his own program). Armed with this knowledge Jeff bought Wildcat! 3.90 and was amazed to have it up and running in a couple of hours.

Jeff first got into BBSs when his parents, Bob and Nancy Tucker brought home a computer complete with a 2400 baud internal modem six years ago. Jeff lost a lot of sleep in his early BBSing days, while playing around with this "highly addictive" new medium. After poking around several other real estate boards Jeff thought he could do better, leading to the birth of his board in November of 1992.

His two- line board carries real estate shareware files such as amortization programs, and housing statistics - not to mention listings of properties. Besides having text describing a particular property, Jeff has picture images of properties online as well. He uses a camcorder and photographs a unit for a few seconds and simply captures the picture to his board for display, making the whole process quick and efficient. Pictures are available both as .GIF downloadable files or in a FRACTERM format, by **Imagen, Inc.**, of Vancouver, BC, Canada, **(604)687- 1030**, which offers live, or real- time images online.

Jeff & Lana Tucker

What the pair would like to see is a real estate BBS list comprehensively covering the country. To facilitate this they encourage all real estate BBS sysops to send them information on their board either to The Real Estate Shop BBS, or via snail mail: **The Real Estate Shop BBS**, c/o Jeff and Lana Tucker, 7328 Winery Lane, Charlotte, NC 28227. Since the list is currently comprised of a total of 15 BBSs, it is perhaps the most up- to- date list around, being updated - literally - continuously.

To subscribe to the list send e- mail to:**LISTSERV@VNET.NET**, with the first line of the body of the message reading: **SUBSCRIBE REALTY- L** and your first and last name. For those without e- mail access call The Real Estate Shop BBS, and download the file: **realty.ZIP** for free. Lana, who is also responsible for maintenance of the board, says that there are daily requests for the list.

Many of the callers to his board are other real estate brokers interested in information and assistance on how to set up their own BBS systems, something Jeff encourages. Other callers are individuals looking to purchase a home or condominium, of these Jeff is currently working with five clients he has met online. While this may not seem like a great number of individuals initially, it is five clients he may not otherwise have had at all. As people become aware of the board's existence it is getting busier, most likely to bring even more customers to Jeff's door.

Jeff sees business BBSs as a common tool in the business arena of the not too distant future - not just for real estate, but for all businesses. This view is not an uncommon one and he will find an ardent supporter in Dennis Hauser, sysop and list keeper of the **National Business/Professional BBS list**. With over 100 businesses on his steadily growing list, Hauser also believes that BBSs will be a standard business tool in the near future, much as the telephone is today.

Hauser who has been an entrepreneurial business buff from the day he graduated college, first went into the retail camera business and soon built up a small chain of three stores which he eventually sold. Since then his efforts have been directed mostly at marketing, training and customer service. Hauser, who spoke at **One BBSCON** last year on "**How to Direct Market Your BBS**," provides a nifty shareware demo package introducing novice BBSers to the online world.

The package, titled "**DemoWriter**" available as shareware under filename **DWRK.EXE**, by P2 Enterprises, is a great way for sysops to introduce new users to their boards. Hauser's walks a user through logging on to his board, "**The Delight the Customer BBS**," **(517)797- 3740**, and then through three separate areas including: Message Conferences, Files and Programs, and a Jobs Database. It is particularly helpful for individuals who have never logged on to a BBS before and is available on his board in the training area. For those who aren't sure how to get it there he will mail you a copy free of charge if you leave a message or fax on the 24 hour voice support line for his board at **(517)797- 3351**.

Hauser believes business boards of tomorrow will be more efficient than many of today's current boards. Hauser, who was a speaker at One BBSCON last year on "How to direct market your BBS," said efficiency comes in many forms, and one of those is a "flat" menu hierarchy - being able to go from a menu directly to the information you are looking for, rather than going through four or five menu layers to get to where you need to be and then having to back out of these layers. (It should be noted that layered menus are specifically designed to facilitate sorting through large numbers of files quickly and efficiently.)

Another way boards Hauser thinks business boards will be more efficient is by keeping unnecessary graphics to a minimum. Text gets lost among too

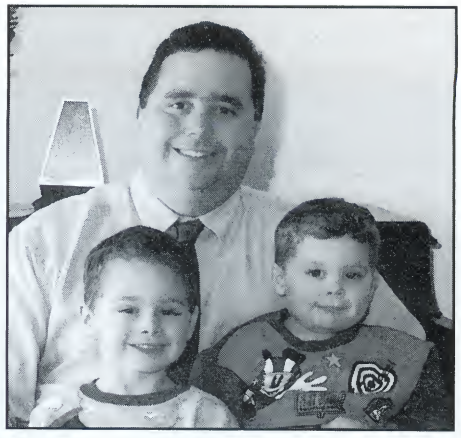
busy graphics, and they also make menus move slower, he explains. Making sure that all files are compressed for downloading is also a good time saver. And saving time is paramount to business boards. As Hauser puts it, if a business can shave even 10 seconds off a caller's time, not by rushing them, but by being more efficient, after several hundred phone calls it really makes a difference.

While many hobbyist's boards are busiest from mid- afternoon on into the wee hours of the morning, business boards tend to peak during business hours, since many of the callers call from work, and aren't paying the high daytime long distance rates out of their own pockets. Hauser says this is the case with his Delight the Customer BBS, a customer service and professionals' business board. In fact many of the subscriptions to his board are paid for with company credit cards and checks.

A typical file that could be found on his board would be the results and research of a study an executive did comparing telephone systems for a large corporation, for example. This way, an executive faced with a similar task is given a head start on the job, saving both time and money. As if one BBS isn't enough, Hauser is also the sysop of the Classroom Earth BBS, funded by a grant from NASA.

Through his job as Director of Customer Service for the **Consortium for International Earth Science Information Network, CIESIN**, Hauser became sysop of Classroom Earth, a BBS dedicated to distributing global and environmental change data, and information on NASA programs. It is largely a board used by research scientist, educators and students but is open to anyone at **(517)797- 2737**, or by TELNET at **classroom_earth.ciesin.org**, port 2010. Classroom Earth has 16 direct dial lines and 16 TELNET ports as well. Both his Delight the Customer BBS and Classroom Earth are run on eSoft's TBBS software.

Even as the sysop of two BBSs, Hauser manages to keep his family intact. This is largely due to his wife, Melanie's involvement in singing, dancing and acting locally. When she is at rehearsal, he stays home with their two children, Alec, 5, and Ben, 3. While baby sitting, he finds the time to maintain his own board, Delight the Customer BBS. Even though Hauser enjoys bulletin boards a great deal, running two of them is too much, he said. He is looking for a sysop to take the helm of Classroom Earth to free him up to accomplish other tasks.



Dennis Hauser & Sons

The business BBS list can be freely obtained by logging on to the Delight the Customer BBS and will be found on the main menu as: National Business/Professional BBS List.

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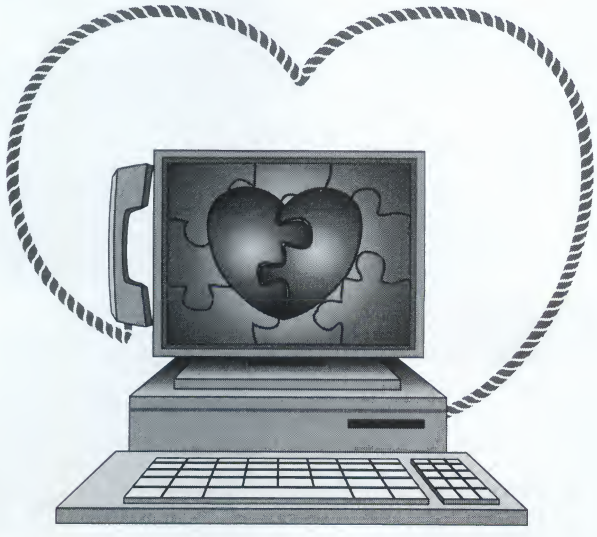

Site	Local Number
San Antonio, TX	(210) 337-6485
Anchorage, AK	(907) 248-9037
Austin, TX	(512) 458-1172
Dallas, TX	(817) 354-8880
Washington, DC	(703) 931-4902
Denver, CO	(303) 232-5523
Houston, TX	(713) 480-4466
Los Angeles, CA	(714) 895-5862
New York, NY	(516) 231-6966
Richmond, VA	(804) 270-0502
Del Mar, CA	(619) 224-6363
Santa Clara, CA	(408) 492-9700
L.A. Valley Basin, CA	(818) 793-9108
Tampa, FL	(813) 961-8665
VA Beach, VA	(804) 547-7608

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BUSINESS & PROFESSIONAL BBSs

NAME	NUMBER	BPS	SYSOP	LOCATION	SOFTWARE
Sales Force	(817)847-9255	14400	Ronnie Oldham	Fort Worth, TX	TBBS
ACS Online	(513)624-0552	9600	Tarry Shebesta	Cincinnati, OH	TBBS
Agri-Specialists BBS	(918)255-6542	9600		Wann, OK	RA
America's Suggestion Box	(516)471-8606	14400	Joe Jersynski	Ronkonoma, NY	TBBS
American Business Research Net	(516)754-9205	2400	Rob Imbriale	Commack, NY	
Anomalous BBS	(615)952-5638	14400	Roger Cook	Nashville, TN	MajorBBS
Arizona Guide	(602)797-0910	14400	Art Tarsha	Tucson, AZ	TBBS
Assembler BBS	(503)343-6383	2400	Dave Klindt	Eugene, OR	RBBS
Attention To Details	(909)681-6221	14400	Clint Bradford	Riverside, CA	RYBBS
Auction Action Online	(216)454-8003	9600	James Nicely	Akron, OH	Wildcat!
Auction Action Online	(216)454-8003	2400		Akron, OH	Wildcat!
Automation Insight	(201)335-7202	9600			
Automobile Consumer Services	(513)624-0552	9600		Cincinnati, OH	
Axcess-Emergency Medicine	(412)363-7510	2400		Pittsburgh, PA	TBBS
Biz-Net 2000 Online	(313)559-8604	14400	Oscar Petoskey	Southfield, MI	VBBS
Bizynet	(619)283-1721	14400	Chris Gunn	San Diego, CA	QuickBBS
Black Bag	(302)994-3772	2400	Edward Delgrosso	Wilmington, DE	Maximus
Book BBS	(215)657-6130	9600		Willow Grove, PA	
Book Stacks Unlimited	(216)861-0469	9600	Charles Stack	Cleveland, OH	TBBS
Business Online	(216)332-2712	2400	Macy Bergoon	Salem, OH	Wildcat
CBEE	(202)267-4644	9600		Washington, DC	TBBS
Career Connections	(415)917-2125	14400		Los Altos, CA	TBBS
Career Decisions Bbs	(909)864-8287	2400	Ralph Schlender	Highland, CA	Wildcat!
Career Systems	(413)592-9208	14400	Ed Carroll	Chicopee, MA	Wildcat!
Careers Online	(317)873-6283	14400		Zionsville, IN	PCBoard
Central Records	(916)443-8470	9600		Sacramento, CA	TBBS
Chicago Syslink	(708)795-4442	14440	George Matyaszek	Berwyn, IL	TBBS
City Senders BBS	(216)734-1477	2400	Dennis Mraz	North Olmsted, OH	TBBS
ClassiComputerfieds	(317)359-5199		Steve Edsall	Indianapolis, IN	Custom
Compu-Mall!	(215)672-0281	9600	Rick Kosick	Southhampton, PA	TBBS
Computer Security BBS	(303)962-9536	14400	Calvin Cline	Loveland, CO	Wildcat!
Construction Hotline	(209)982-1297	2400	Tracy Pengilly	Manteca, CA	Wildcat!
Crescendo	(410)792-7208	14400		Laurel, MD	TBBS
Cruise Trek'S SuperBBS	(505)525-8626	14400	Gordon Lagrow	Las Cruces, NM	SuperBBS
Cyberia	(717)840-1444	14400	Adam Viener	York, PA	TBBS
Dissociation Network	(518)462-6134	2400	Maureen O'Brien	Albany, NY	VBBS
EDN Magazine BBS	(617)558-4241	9600	Charles Small	Newton, MA	MajorBBS
Electronic Medical Center	(407)241-7142	14400		Boca Raton, FL	TBBS
Electronic Publishers BBS	(503)624-4966	14400	Brian Cash	Portland, OR	TBBS
Energy/Recycling BBS	(704)547-3114	2400		Charlotte, NC	TBBS
Engineering Paradise	(513)864-1386	14400		Fairborn, OH	SBBS
Entrenet	(908)647-2202	9600	Greg Legacki	Basking Ridge, NJ	TBBS
Evergreen BBS	(201)398-2373	14400	Bob Lawton	Hopatcong, NJ	Wildcat!
Evergreen BBS	(201)398-2373	14400		Hopatcong, NJ	Wildcat!
Eye Resources Network	(708)299-1296	16800	Tom Young	Des Plaines, IL	RA
FJob	(912)757-3100	9600	Suzi Hamilton	Macon, GA	TBBS
Farm Net USA	(805)339-0945	14400	Bob Davis	Ventura, CA	TBBS
Fedlink Alix II	(202)707-4888		Fed Library Infonet	Washington, DC	
Fifth Estate	(702)898-9684	14400	Darrell Lowe	Las Vegas, NV	Spitfire
Fifth Estate BBS	(702)898-9684	14400	Darrell Lowe	Las Vegas, NV	Spitfire
Free Financial Network	(212)752-8660	14400	Alex Nason	New York, NY	MajorBBS
Galactic Rim	(206)857-3106	14400		Gig Harbor, WA	PowerBBS
Good Sam BBS	(714)957-2881	14400	Michael De Tomaso	Costa Mesa, CA	PCBoard
Healthline	(813)751-4573	2400	Tom Batchelor	Bradenton, FL	Access
Home & Vacation Network	(216)237-7727	14400		Cleveland, OH	Wildcat!
Home Automation BBS	(416)471-6776	9600		Toronto, ON	TBBS
Horseman's BBS	(517)596-3233	14400	Brad Settles	Munith, MI	Falken

Business & Professional BBSs

NAME	NUMBER	BPS	SYSOP	LOCATION	SOFTWARE
IACC Online	(313)763-7225	14400		Ann Arbor, MI	TBBS
IFHCA	(713)948-9906	2400		Houston, TX	TBBS
Inbound/Outbound & Teleconnect	(212)989-4675	2400	Harry Newton	New York, NY	TBBS
Infomarket Express	(908)879-7209	14400	Edward Brzezowski	Chester, NJ	PCBoard
fonet BBS	(609)628-4311	9600	Bob Fehn	Petersburg, NJ	Wildcat!
International Music Suppliers	(708)870-8126	2400		Mount Prospect, IL	TBBS
Investors Online Data	(206)285-5359		Don Shepherdson	Bellevue, WA	
Jobbs	(404)992-8937		Bill Griffin	Roswell, GA	
Kimberlely BBS	(612)340-2489	9600		Minneapolis, MN	
L!nking R!ngs Systems	(318)449-4824	14400	Don Hutson	Pineville, LA	Wildcat!
Labor & Insurance Law BBS	(805)495-9911	14400	Rene Thomas Folse	Thousand Oaks, CA	MajorBBS
Lakewood Police Department	(303)987-7388	2400	Larry Scheideman	Lakewood, CO	RBBS
Law & Order	(517)263-0273	14400	Chris Bourne	Adrian, MI	
Legis	(210)656-2631	2400		San Antonio, TX	TBBS
Leisure & Business BBS	(516)293-7540	14400		Farmingdale, NY	Wildcat!
MMIS Real Estate BBS	(708)834-1450	16800	Matthew Rechs	Villa Park, IL	TBBS
Max Ule's BBS	(212)809-1160	9600	Max Ule	New York, NY	TBBS
Mechanix Choice	(215)887-0171	14400		Glenside, PA	TBBS
Moneyline Express	(718)816-5502	2400		Staten Island, NY	TriBBS
My Favorite BBS	(916)381-2851	14400	Kevin King	Sacramento, CA	Wildcat!
NVFC Firewatch	(303)452-0105	9600	Ken Westlund	Denver, CO	RA
Nightwatch	(309)963-6060	14400	Jeff Tapke	Danvers, IL	Maximus
Odyssey Music	(503)695-3290	9600	Fred Katt	Corbett, OR	Wildcat!
Online Opportunities	(215)873-7170	14400	Ward Christman	Downingtown, PA	TBBS
Opportunity BBS	(804)588-4031	14400	Patrick Jordan	Norfolk, VA	RBBS
PJ Systems	(517)451-2072	14400	Peter Forgacs	Britton, MI	TBBS
Pitstar BBS	(708)687-4413	14400	Patrick Smith	Oak Forest, IL	PCBoard
Price Shopper BBS	(303)798-0727	14400	Bob Crook	Littleton, CO	MajorBBS
Psychonominal BBS	(318)254-0274	14400	Sam Hutchinson	Ruston, LA	Wildcat!
RIRBBS	(301)309-1808	14400	Steve Schulin	Rockville, MD	FirstClass
RRI Bulletin Board	(919)331-6039	9600	Jorice Williams	Elizabeth City, NC	TBBS
Radiolink	(708)518-8336	9600	Jack Taddeo	Park Ridge, IL	TBBS
Realpix BBS	(702)566-6840	14400		Las Vegas, NV	DLG
Run Of The Mill BBS	(415)343-5160	14400	Don Silva	San Mateo, CA	RBBS
SBA Online	(800)697-4636	9600		Washington, DC	
Sarte Collection	(407)881-0358	9600	Roger Mealey	Palm Beach, FL	Wildcat!
Search BBS	(206)253-5213	2400	Bill Sawvel	Vancover, WA	Spitfire
Servant Of The Lord BBS	(804)590-2161	14400	Charles Wootten	Matoaca, VA	Wildcat!
Six Sigma BBS	(314)349-7616	14400	Ron Hartge	St. Louis, MO	MajorBBS
Sleuth BBS	(818)727-7639	14400	Mark Valentine	Chatsworth, CA	Searchlight
Solutions	(407)321-6119	2400	Dan Slage	Sanford, FL	MajorBBS
Sourcery	(702)256-6050	14400	Teresa Schoen	Las Vegas, NV	MajorBBS
Stat Agline!	(604)531-8818	2400		White Rock, BC	TBBS
InStochos BBBS	(518)393-0243	9600	Chris Miller	Schenectady, NY	Spitfire
Strictly Business!	(614)538-9250	2400	Bruce Kullberg	Columbus, OH	Wildcat!
Tech BBS	(219)654-3210	9600	Jim Buszkiewicz	New Carlisle, IN	TBBS
The Ad Connection	(804)978-3927	2400	David Jones	Charlottesville, VA	TriBBS
The Algonquin Round Table	(612)772-8628	9600	Patrick Sonnek	Twin Cities, MN	Proline
The Bizopps Connection	(310)677-7034	14400	Lawrence C. Toliver	Inglewood, CA	MajorBBS
The Bu$inessman'S Special	(312)736-5415	9600	Larry Teren	Chicago, IL	Wildcat!
The Business Center	(707)451-0393	14400	Gary Dent	Vacaville, CA	Wildcat!
The CPA's BBS	(202)882-9067	14400	Rob Richmond	Washington, DC	RBBS
The Computer Plumber	(319)337-6723	9600	Art Petrzelka	Iowa City, IA	
The Dealmakers BBS	(908)730-9002	14400	Ted Kraus	Belle Mead, NJ	PCBoard
The Delight The Customer BBS	(517)797-3740	9600	Dennis A. Hauser	Saginaw, MI	TBBS
The Market BBS	(201)467-3269	14400	Alan Sislen	Short Hills, NJ	PCBoard
The Meeting Works	(212)737-6932	14400	John K. Mackenzie	New York, NY	MajorBBS

Business & Professional BBSs

NAME	NUMBER	BPS	SYSOP	LOCATION	SOFTWARE
The Nashville Audio Exchange	(615)373-2795	2400	Bret Teegarden	Nashville, TN	Wilidcat!
The Nonprofit Network	(609)261-5772	2400	Joseph Arcieri	Mount Holly, NJ	XBBS
The Pill Box	(405)681-5818	2400		Oklahoma City, OK	Maximun
The Professional's BBS	(716)728-3896	2400		Wayland, NY	Spitfire
The Real Estate Connection	(303)933-3372	9600	Alisa Hager	Littleton, CO	Spitfire
The Resume File	(805)581-6210	2400	Steve Hawley	Simi Valley, CA	Wildcat!
The Software Store	(516)589-4984	9600	Michael Colucci	Bohemia, NY	Wildcat!
The TQM Bbs	(301)585-1164	14400	Tom Glenn	Takoma Park, MD	RBBS
The Vitamin Shop	(609)778-5922	2400	Joseph Arcieri	Lumberton, NJ	Wildcat!
The Wall Street Connection	(808)521-4356	14400	Keith Nakata	Honolulu, HI	PCBoard
Town Center Info Exchange	(410)995-1809	14440	Bob Martin	Columbia, MD	TAG
Vertech'S Graphic Connection	(503)591-8412	14400	Brant Katkansky	Beaverton, OR	TBBS
Video Network BBS	(513)891-2129	2400	Jim Gadrow	Cincinnati, OH	Custom
Virtual Office Complex	(805)339-0945	14400	Bill Curdy	Ventura, CA	TBBS

Real Estate BBSs

NAME	NUMBER	BPS	SOFTWARE	SYSOP
The Real Estate Shop BBS	704-531-7375	14,400	Wildcat	Jeff Tucker
The Prof-BBS	606-269-1565	14,400	Wildcat	Don Bodley
The ReaLink	614-221-7425	14,400	PCBoard	Mike Ossing
Real Estate World BBS	215-426-2268	14,400	Wildcat	Ed Noble
The DealMakers	908-730-9002	14,400	Wildcat	Ted Kraus
The Easy Way Inn BBS	508-672-4837	14,400	Wildcat	Thom Souza
The Market Place	209-543-9034	14,400	Wildcat	David Goss
Homes Online	919-894-1690	14,400	PowerBBS	Jeff Johnson
House Net	410-745-2037	14,400	Wildcat	Gene Hamilton
Metroline Wire Services	604-948-0272	14,400	FirstClass	Stephen Dimond
Niagra On-Line Information Services	905-734-8827	14,400		Barrie Brown
Channel 'E'	604-988-2988	2400	RoboBoard	Chester Bryndza
Computer Real Estate On-Line	714-552-8347	14,400	Wildcat	George Vincente
Gemstar Information Services	206-539-3533	14,400	CoConet	Vince Callaway
Home Line BBS	801-569-1881	14,400	PCBoard	Thom Allen

Searchlight BBS

...you won't believe your GUIs

The Graphical User Interface is here to stay. Your callers love the dazzling displays and powerful features that Windows and OS/2 provide. They don't want to give that up just to call your board.

If you just want graphics, you can choose any BBS program that supports TeleGrafix's Remote Imaging Protocol. But if you want the power that only a true GUI provides, then you need Searchlight 3.5.

RIP support, not RIP service

Beauty—like our competition's RIP support—is only skin deep. They still display text in 20-line chunks. They make you press *Enter* to confirm choices. And make you tag items by typing line numbers.

And they can't create RIP screens. So you have to buy a paint program and spend hours drawing screens that match your menus.

Searchlight believes in doing things first, and getting them right. In 1987, we released the first BBS with a full-screen editor. In 1988, we added Lotus-style menus. In 1993, we were first with RIP support.

Our RIP support isn't tacked on—it's built in. We generate RIP screens on the fly. We give callers pick lists, scroll bars and dialog boxes.

Is there really a difference? Listen to Boardwatch editor Jack Rickard: "Searchlight has incorporated RIP technology to an amazingly integrated level with their BBS package... It looks hot."

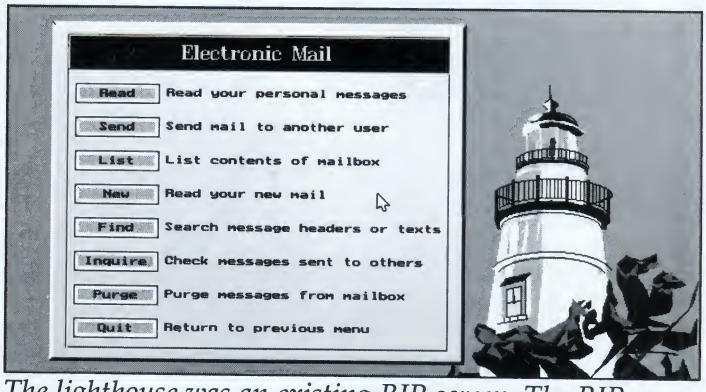
No fine print

Callers like the things Searchlight 3.5 does. Sysops like the things Searchlight won't do.

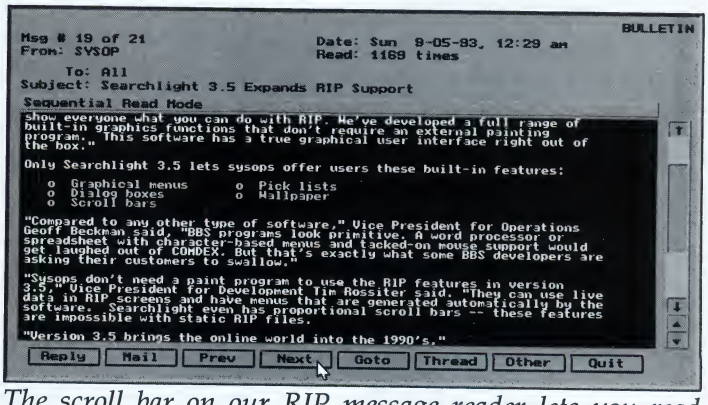
We won't charge extra for DigiBoard compatibility or tech support. Our remote DOS shell is built in. Our 30-day, money-back guarantee is unconditional, with no "restocking fee". If you want to add lines, we credit all your purchase price toward your upgrade.

And we don't want to sell you a terminal program. We include TeleGrafix's RIPterm with every copy of Searchlight, so you can give every new caller a free, RIP-compatible terminal.

So call us for your demo of Searchlight 3.5 today. And see why our sysops and their callers say that Searchlight just isn't like the other GUIs.

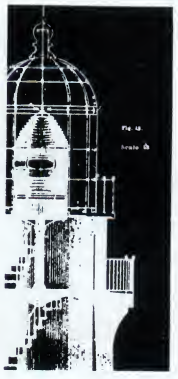


The lighthouse was an existing RIP screen. The RIP menu on it was automatically generated by Searchlight.



The scroll bar on our RIP message reader lets you read mail line by line. To jump anywhere in the message quickly and easily, click on the bar.

$99 ..... single line	*$299..... 1-10 lines*
$179 ..... 1-3 lines	*$399.....unlimited*



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Now Showing on a Computer Screen Near You!

WELCOME TO
> > > LINDA'S OWN BBS! < < <

Yes, you read correctly! Welcome to my very own bbs.
As a charter member of my board, you're entitled to have a great time!

>>>LINDA'S CONFERENCE:

LJONES [Lulu]: Hey, great bulletin board, Linda! Thanks for the invitation to join!

LWILLIAMS [Linda]: You're quite welcome. Glad you could make it!

BDAVIS [Big Bad Bob]: So, how'd you pull this off? (envious smile....) Your own forum on a national online network?

LWILLIAMS [Linda]: Yeah! NVN offers private forums to any group who needs a place to communicate. I told them my friends and I were looking for a new home. They set up my own forum! I've got a private message base, conferencing and even our own private data libraries for exchanging files. <G>

GSTUTZ [GailTheGale]: Not bad! We also get access to all of NVN's other services. Games, forums, chat, business info. There's dozens and dozens of forums out there. I love playing MUD II!

HBENSON [Vrrroooom!]: Linda, do you think I could get a forum for my stock car racing buddies? We're looking for a way to communicate.

LWILLIAMS [Linda]: Absolutely! Give them a call at **1-800-336-9096**. It's easy!

LJONES [Lulu]: Hey, I'm gonna go play MUD II! Talk to you later! :)

We supply the hardware, the bbs, and dial in access across the nation. You supply the friends.

For more information on setting up your own bulletin board, contact NVN at **800-336-9096**.

To register for a subscription to NVN, follow the instructions in the box at right.

How to register for an NVN subscription:
To register on-line, set your comm software to 1200, 2400 or 9600 bps, N-8-1, and full duplex. **Dial 1-800-336-9092.** When connected enter BW94CS and press <RETURN>. Then enter name, address and Visa,® Discover® Card, MasterCard,® American Express® or EFT number. Your Starter Kit will be mailed right away.
For more information, call 1-800-336-9096.

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NVN–Good stuff. Good price.

Subscription is $8.95/month which includes 4 hours; or $12.95/month which includes 8 hours; or $19.95/month which includes 15 hours of non-prime time access in standard services. 9600 bps access available at no surcharge. Standard services are $2.50/hour during non-prime (6pm - 7am weekdays, and all day weekends); $7.50/hour during prime-time (7am - 6pm, Mon-Fri). A few select premium services carry additional charges. Unused portions of hours provided by subscription may not be carried forward or transferred. Hourly rates and service content are subject to change without notice. NVN is a service mark of National Videotex Network. Corp. All others for identification purposes only and belong to their respective companies or organizations.

Are you running your BBS for Business or Pleasure?

The Major BBS® by Galacticomm with Credit Card Add-on Modules by DataSafe will let you create the successful and profitable BBS you have always envisioned!

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The POS Dial module is designed to interface with VisaMan and Omni-Mall to perform automatic online credit card approval or declination, 24 hrs a day. Never worry about manual processing of your credit cards sales again.

Omni-Mall™ $249

The first end-to-end shopping mall for The Major BBS. Performs file distribution of data products such as software, data base information and valuable text files. Email receipts and orders Faxed to store managers. Works with the POS Dial module for automatic online credit card verification.

AutoRate™ $99

AutoRate is a credit surcharge utility that allows you to vary credit usage rates based on channel group, day of week, and time of day. Ideal for systems using X.25 leased lines, surcharging high speed modem lines or discounting during off peak hours.

The Major BBS® by Galacticomm with Entertainment Add-on Modules by DataSafe will let you create the hottest multi-user game system around.

Assignment: Wallstreet™ $99

You have been transformed into a lowly MBA graduate, fresh out of an IVY league school. Your mission: to become a powerful corporate raider. Rise through the ranks with only your cunning to assist you, and if you live long enough, you just might make it to the top!

FOURmation™ $49

Bring the excitement of vertical checkers to your system. Be the first to get four tiles in a row either vertically, horizontally, or diagonally and wint the game. Multiple games can be played simultaneously. Users can watch games in progress and challenge other users.

NovaTrek™ $99

NovaTrek is a full screen ANSI space game in which you become the captain of a spaceship and recruit a crew to scour the galaxy for uncharted planets, aliens and adventure. Sysop configurable options include number of planets, players and aliens plus, ship and alien specifications.

SubStriker™ $99

You command your own nuclear powered submarine and you must protect your country from the evil forces that lurk in the calm, deep waters. A "heads-up" full screen ANSI display display allows for total control of all aspects of your sub. Real-time display updates make for the most realistic multi-user interactive simulation available on the market today! Included features such as multiple sub classes, weapon systems and extensive online help!

Super Hangman $49

Along with standard hangman rules, you can request both antonyms and synonyms for the mystery word, thereby increasing vocabulary usage.

- Galacticomm Products Discounted -

DataSafe Publications, Inc. develops add-on products for The Major BBS, resells Galacticomm software and runs it's own successful BBS. Whether you are setting up a Local Entertainment BBS, Corporate Support System or a National Online Service, we can help. Give us a call when you are ready to setup your system or when you need to

The Major BBS 6.12 (2 User)..... $199
User 6-Pack..... $200
RIPscrip Add-on Option..... $212

All Galacticomm Products Discounted

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In order to accept credit cards on your BBS you will need to secure a merchant account. Many banks and merchant account vendors don't understand BBSs and how they operate. They either refuse merchant accounts to BBS operators or charge high rates for their services. Teleflora on the other hand knows BBSs and wants your business. As a representative for Teleflora, DataSafe can help you secure a merchant account. Give us a call today for a Teleflora application.

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HelpMan scans your BBS subdirectory for the help files provided with MBBS/TPD moudles and lets your users display them online. Plus, you can add your own custom help files!

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Two listers for the price of one! The BBS Lister allows you to maintain up to 10 independent BBS Lists on your Major BBS at the same time. You can set up local, state, national & support lists. Plus you get the "MajorNet Edition" as a bonus.

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BOARDWATCH
List of BBS List Keepers

This listing comprises a list of those who compile and maintain lists of bulletin boards, either by topical category, or by some geographic area or definition - often by area code. The primary bulletin board system where the list can be downloaded electronically is also included.

BBSLIST TOPIC	AUTHOR/EDITOR	CONTACT BBS	TELEPHONE
Republic of South Africa	Henk Wolsink	Catalyst BBS	(041)34-1122
Connecticut AC 203	Kevin Brook	Creative Edge BBS	(203)743-4044
BBS With Handicapped Focus	Bill McGarry	Handicap News BBS	(203)926-6168
Seattle AC 206/West Washington	Bob Dinse/Nanook	Eskimo North	(206)367-3837
Tacoma Washington AC 206	Richard Langsford	AmoCat BBS	(206)566-1155
Autocad Related BBS	Jason Osgood	SAUG BBS	(206)644-7115
Kitsap County Washington	Michael Schuyler	Quicksilver BBS	(206)780-2011
Maine 207	Scott R. Bodeen	Street Corner BBS	(207)442-0997
Central California AC 209	Jack Porter/Madera UG	Zen Den Systems	(209)675-8436
Graphical User Interface BBS	David Shapiro	The Gooey (GUI) BBS	(212)876-5885
96 List - 9600+bps BBS	Ken Sukimoto	Downtown BBS	(213)484-0260
Open Access UNIX Site List	Phil Eschallier	LGNP1 (login:BBS)	(215)348-9727
Pennsylvania AC 215/609/302	Ron Brandt	DSC/VOICENET	(215)443-9434
Cleveland Area 216	Jim Barry	Flip Flop	(216)951-9134
Champaign-Urbana IL AC 217	Eddie Thomson	The Dungeon BBS	(217)355-1214
Conservation/Nature BBS List	D.Wendling/JS Christianso	Coin of the Realm	(301)585-6697
Ham/Amateur Radio BBS	Stan Staten	3WINKs BBS	(301)590-9629
Handicapped Issues BBS	Richard Barth	HEX BBS	(301)593-7357
Desktop Publishing BBS	Frank Atlee	Infinite Perspective	(301)924-0398
Delaware AC 302	Vince Boehm/Dave Osburn	Talk Radio BBS	(302)429-7667
Medical Issues BBS	Edward Del Grosso	Black Bag	(302)994-3772
Colorado AC 303/719	Willis Morrow	Big Boy's BBS	(303)458-3832
Cave Exploration BBSs	Douglas L. Moore II	The CatEye BBS	(304)592-3390
South Florida Area 305/407	Eric Thav	Silicon Beach BBS	(305)474-6512
Southern California	Mike Hefferman	SOCAL Corner	(310)422-7942
California AC 310	Jim Walton	Illusions BBS	(310)804-3324
Detroit Area 313	Horst Mann	Tony's Corner	(313)754-1131
St. Louis AC 314	Beth Brooks	Fire Escape's Dir	(314)741-9505
ASP BBS Member List	Bob Ostrander	PBS-BBS	(317)856-2087
Engineering Related BBS	Arthur Petrzelka	Computer Plumber	(319)337-6723
Rhode Island Area 401	Mike Labbe	Eagle's Nest	(401)732-5292
Alberta AC 403	Stephen Decarie	T-8000	(403)246-4487
Calgary Alberta AC 403	Jose del Rio	The Quantum BBS	(403)252-5119
Atlanta Area 404	Online Atlanta Society	OASIS	(404)627-2662
Atlanta Area 404	Rodney Aloia	INDEX System	(404)924-8472
Montana Area	Jay Michalik	Valley Light BBS	(406)273-6399
Orlando Florida AC 407	Matt Drury	London BBS	(407)895-1335
San Francisco Bay Area	Mark Shapiro	BABBA BBS	(408)946-5642
Baltimore BBS Area 410	Brad Blase	Silver Streak BBS	(410)683-1583
Pittsburgh AC 412	Chas Stokes	Zuul's Catacombs	(412)264-9787
National BBS List	DP McIntire/Beth Spotts	Ameriboard	(412)349-6862
North America Nudist List	Patrick O'Brien	Natural Connection	(414)426-2110
Ontario AC 416	Jeff Young	Tradewinds BBS	(416)503-4388

BBSLIST TOPIC	AUTHOR/EDITOR	CONTACT BBS	TELEPHONE
Toledo Ohio Area	Ryck Zarick	Programmer's Tech	(419)478-7333
Arkansas Area 501	Bob Underdown	The Blue & The Grey	(501)444-8420
Portland Oregon BBS	Lisa Gronke	DawGone Disgusted	(503)297-9145
New Orleans BBS List	Jeff Jones	Southern Star BBS	(504)885-5928
New Mexico Area Code (505)	Dan Kiehl	MDC Computers BBS	(505)434-0258
Worcester MA AC (508)	Jim Metzler	Miwok Village BBS	(508)754-6512
Corpus Christi	James Cordani	Treasure Island	(512)241-8358
Austin Area BBS List AC 512	John Foster	Camel's Back BBS	(512)243-0077
Selected BBS	Joseph Caplinger & Son	J&J's BBS	(513)236-1229
List of Gay/Lesbian BBS	Eric Blair	S-TEK BBS	(514)597-2409
AC 516 Free Shareware BBS	Harold Stein	Long Island Exchange	(516)271-6523
Area Code 517 - Mid-Michigan	Rick Rosinski/SAMM	Wolverine BBS	(517)695-9952
Business/Professional BBS	Dennis Hauser	Delight The Customer	(517)797-3740
Phoenix AC (602)	John Mendivil	Majestic Royalty BBS	(602)278-1651
Phoenix AC (602)	Sue Widemark	Cheese Whiz BBS	(602)279-0793
Cochise County Arizona	Kevin McCrory	The Commo Shack BBS	(602)452-0587
Kentucky AC (606)	Jon Hagee	Kentucky Explorer	(606)271-1451
Wisconsin 608	Jim Wargula	JW-PC Dataflex.HST	(608)837-1923
New Jersey AC 609	Dave Schubert	The Casino PCBoard	(609)561-3377
New Jersey Area 201/609/908	Wayne R. Morton	Praedo BBS	(609)953-0769
Minnesota Twin Cities AC 612	Barry Watson	Abiogenetic BBS	(612)774-8454
Apple II BBS	Mike Shecket	Way Out	(614)436-4846
Tennessee AC 615/901	unknown	SPDA Info Service	(615)952-5638
San Diego, CA AC 619	Tom Grigg	ComputorEdge	(619)573-1675
San Diego AC 619	Joe Nicholson	General Alarm	(619)669-0385
Apple II BBS with Internet con	Morgan Davis	pro-sol	(619)670-5379
Virginia AC 703/804	Eddie Gebhard	PC Power House	(703)348-1423
OS/2 BBS Systems	Pete Norloff	OS2/Shareware BBS	(703)385-4325
Washington DC BBS List	Mike Focke	Interconnect	(703)425-2505
Geneology Related BBS	Richard A. Pence	NGS-CIG	(703)528-2612
Charlotte NC AC 704	Blaine Schmidt	Moobasi Optics, Ink	(704)541-9842
Charlotte, NC AC 704	Blaine Schmidt	Moobasi Optics, Ink	(704)541-9842
Black Run/Oriented BBS	Arthur "Rambo" McGee	BDPA BAC BBS	(707)552-3314
Chicago	Paul Chartraw	The Hideaway BBS	(708)748-1911
Airline Pilot/JUMPSEAT BBSs	Rex Chadwell	ChicAAgo Hangar	(708)980-1613
Houston Area 713	David E. Wachenschwanz	Atomic Cafe BBS	(713)530-8875
Rochester NY AC 716	Tracy Logan	Logan's Run	(716)328-2914
Ecology/Conservation BBS	Bob Chapman	EarthArt BBS	(803)552-4389
Firearms Related bbs	Jerry Brunet	Neon Nights	(804)588-4978
Wildcat! BBS	Jim Harrer	Wildcat! HQ	(805)395-0650
Central California Area 805	Larry Honore	His Board	(805)652-1478
Oahu Hawaii	Brent Davis	Land's End BBS	(808)499-2527
Technical Support BBS List	Gary Barr	Digicom BBS	(812)479-1310
Pinellas/Tampa Florida AC 813	Emery Mandel	Mercury Opus	(813)321-0734
Kansas City Area 816/913	Roy Timberman	Sound Advice	(816)436-4516
Dallas/Ft Worth Area 214/817	Mark Robbins	Second Sanctum	(817)784-1178
Occult BBS	Phil Hansford	Mysteria	(818)353-8891
Commodore 64/128/Amiga BBS	John Rigali	Night Gallery	(818)448-8529
Alaska AC 907	Patti Johnson	Alaska Pirate Soc.	(907)248-9364
Darwin National USBBS List	Bob Breedlove	Bob's BBS	(916)929-7511
OS/2 Related BBS	Dave Fisher	LiveNet 1:170/110	(918)481-5715
Tulsa Oklahoma Area BBS List	Linda Hargraves	ACCESS AMERICA	(918)747-2542
Raleigh NC Area Code 919	Mike Stroud	Micro Message Svc.	(919)779-6674
U.S.S.R. BBS List	Serge Terekhov	Court Crimson King	7-3832-356722

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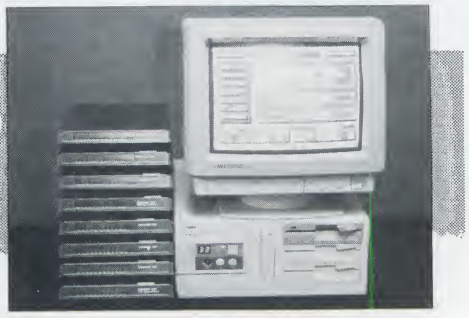

You *can* have it all with *WILDCAT! IM*

Why give up speed, power and flexibility just to run a multi-user BBS? Why pay high add-on prices for the kind of features you have a right to expect in a professional BBS program? Why pay thousands extra for software only a programmer can understand?

WILDCAT! IM easily handles up to eight high speed modem lines on a 486 PC using an intelligent Digiboard card, with no noticeable slowdown in performance. Add one or more eight-line workstations to your LAN, and you have a fully network-compatible multi-user BBS with local logins, *without* having to spend, spend, and spend again.

Yes, We Do Doors

With *WILDCAT! IM*, you're not tied to proprietary modules that cost a lot but might not fit *your* needs. You're not locked in to buying source code or special compilers and libraries if you want to use serious business applications instead of space monster games. And you're not stuck with kludges that require you to have additional PCs networked to your BBS, just to run doors and DOS applications.

That's because *WILDCAT! IM* lets you run off-the-shelf applications as ordinary menu selections. We even give you a customized version of DOORWAY — to add Digiboard compatible COM I/O routines to your favorite DOS applications.

Yes, We Do E-Mail

Whether you need local or wide-area messaging, whether you want shared public conference mail or point-to-point E-Mail, *WILDCAT! IM* can help you do it. Whether you need a simple QWK-compatible network, or our optional MHS and UUCP gateways, *WILDCAT! IM* helps you move the mail.

Yes, We Do LAN Sessions

You don't have to pay hundreds extra just for add-ons to let your LAN users log into the BBS. *WILDCAT! IM* was designed for LAN compatibility from the start. It's this simple: install *WILDCAT! IM* on any network drive. Then run *WILDCAT! BBS* from the DOS prompt at any workstation on the network. Full functionality, including file uploads and downloads across the LAN. Up to 250 simultaneous sessions in any combination of local LAN logins and modem connections. Why do it any other way?

Yes, We Do RIP

RIP (Remote Imaging Protocol) graphics come standard with *WILDCAT! IM*. Users can select menu commands with the mouse, and see graphics comparable to or better than those found on Prodigy or America Online. And we don't make your users give up their favorite professional communications software, either. RIP graphics are fully supported by *QmodemPro*.

Yes, We Do CD-ROM

Of all the new computer hardware developments of the last decade, none have had more impact on the BBS world than CD-ROM technology. CD-ROMs are a perfect way to add huge numbers of files to your BBS. Instead of making you use third-party doors or expensive add-on modules to support a CD-ROM, *WILDCAT! IM* treats it just like another hard drive, showing the CD-ROM files as part of your regular file download areas.

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AQUILA BBS

Chicagoland's Largest System

Since 1988

Aquila has filled the computer screens of Chicagoland for over three years, growing from a single modem line system in 1988 to over 25 lines in 1992. Aquila's success over the years is due to the enthusiastic support of our users. New callers are encouraged to download our current file list and electronic mail conference listing. A short guided tour highlighting our system services is also available for new users. All of our information is automatically mailed to you to read in the comfort of your home or office. So pick up your modem and give us a call! You will find Aquila BBS to be the most valuable bulletin board in your dialer.

The AQUILA BBS Team (Left to right: Kevin & Kristy Behrens, Steve Williams, Chris Babb)

Programs - Thousands On-Line

Give your modem a workout! We add new shareware and public domain programs everyday. Over 400 programs are added weekly. With more than 5 Gigabytes of on-line storage, we stock over 50 thousand programs. Aquila makes it easy to find the programs that are important to you, by organizing them into 120+ file directory categories everyday.

We cater to the Windows User

With Windows becoming the most popular user interface around, we make an extra effort to keep you supplied with the latest programs and enhancements by devoting a special conference area just for Windows containing 2000+ files organized into 40+ file directory categories.

Our organization and the latest programs make our file areas the most popular around. These are just a few of our most popular categories available:

- Diagnostic Utilities
- System Enhancements
- File Organizers
- Word Processing
- Computer Games
- Music and Midi Sound Files
- Computer Animations
- CAD Drawing Utilities
- Business - Finance - Tax
- Novell and Lan Utilities
- Database
- Programming
- Icons - Icon Managers
- Wallpaper - BMP's
- Multi-Media Related
- Fonts - Font Utilities

New User Information

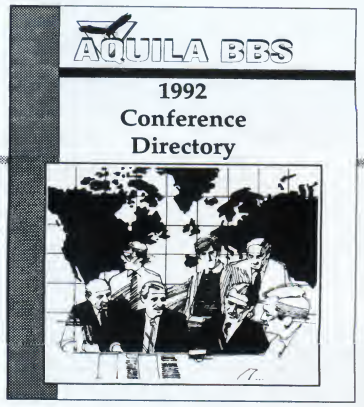
All first time callers receive by mail, our printed 'New User Information' and 'E-Mail Conference Directory' guide, as well as a 'Quick Command Guide' to help you get the most out of Aquila. The new user information covers system services such as answers to commonly asked questions, USAToday, Boardwatch Magazine, and Electronic Mail off-line readers. The 'Quick Command Guide' is a desktop lookup for using Aquila commands.

AQUILA BBS
708-820-8344
New User Information

Aquila Starter Kit

Callers that are new to modem communications will find 'The Aquila Starter Kit' a great time-saver. Easy for the beginner and helpful for the expert! This $39.95 kit includes the following:

- Procomm (communications program)
- Full documentation for all BBS commands
- Off-line file browsing program
- Our complete file listing on floppy disk
- Off-Line E-Mail Reader
- Three month basic membership



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- Vendor Support
- Programming Languages
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Clark Development Company, Inc., developer of **PCBOARD** BBS Software, has made a standing offer to pay **50%** of the cost of classified advertisements in ***Boardwatch Magazine*** placed by any BBS that notes their use of **PCBOARD 14.5a** or later software.

Your cost for an ad here: **$12.50**

MicroSellar BBS (201)239-1151 Verona, New Jersey since 03/83. Sysop: Mark Rapp. Using PCBoard 15.1 with 10 lines on MS-DOS 80486 with 5100 MB storage. US Robotics at 19200 bps. No fee. PCBoard 15.x ALPHA site. NJ's preferred BBS for the professional 11 yrs running. HiSpeed lines for EASY ACCESS. Gold mine of the BEST-QUALITY, Latest Files, Games, Info. MANY mail networks including Internet. Trial access provided -Major credit cards.

Synergy Online Communications (201)331-1797 Parsippany, New Jersey since 07/93. Sysop: Jim Boxmeyer. Using PCBoard 15.0 with 30 lines on MS-DOS 80486 with 10000 MB storage. Cardinal at 38400 bps. No fee. Full FREE access on first call. Internet/Usenet, RIME, Intelec, and U'NI-net. 1000's of recent files online (92/93). All nodes are running V.32 high speed modems. NEW files daily! Contact the world through Synergy! HUGE ADULT AREAS. 1000's of GIFs!

The HOT Tub Chat Lounge (201)617-8054 Union City, New Jersey since 12/89. Sysop: George Eppich. Using MajorBBS V6.11 with 8 lines on MS-DOS 80486 with 8100 MB storage. US Robotics at 14400 bps. No fee. LOTS of CHAT 24 Hours/day with a National Chat Hookup from 7pm to 1am EVERYNIGHT! Meet other MEN & WOMEN across the USA! Chat about ANY & ALL topics. Participate in OUR EVER POPULAR ADULT CHAT! Matchmaking services available! Lots of files, msgs & games!

The GearBox (201)692-1110 New Milford, New Jersey since 11/01. Sysop: Mark Paris. Using Synchronet 1c with 4 lines on MS-DOS 80486 with 4000 MB storage. ZyXEL at 19200 bps. $10 Points fee. Full Featured Multiline system. 4 Nodes, real time chat, doors, 200+ Fidonet confs., 250+ Relaynet Confs., 35000+ Files. Software Distribution Network, Doornet, and much more! Point System subscriptions and flat rates. Visa/MC.

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The Emporium BBS! (817)543-4250 Arlington, Texas since 10/88. Sysop: Henry Buchanan. Using Remote Access 2.0 with 20 lines on MS-DOS 80486 with 6000 MB storage. US Robotics at 19200 bps. $75 Annual fee. One of the largest collections of adult files! Over 17,000 adult files online. Adult games online, with online chat and messages! ADULTS only! Must be 21 years of age or older! Immediate adult access w/valid credit card - VISA, Mastercard, Discover, AMEX

The Wine Connection BBS (818)718-5994 Winnetka, California since 11/93. Sysop: Paul Sennett. Using TBBS 2.2 with 5 lines on MS-DOS 80486 with 250 MB storage. ZOOM at 14400 bps. No fee. Your Best Connection for Fine Wine! Communicate with other Wine Enthusiasts about Fine Wines you want to Buy or Sell and also about many other Wine Topics. Glossary of Wine Terms, Grape Varieties, California's Premium Wineries, and much more!!!

The Ledge PCBoard (818)896-2007 Lake View Terrace, California since 01/87. Sysop: Joseph Sheppard. Using PCBoard 15.1 with 3 lines on MS-DOS 80486 with 2000 MB storage. US Robotics at 14400 bps. $40 Annual fee. Home of the U'NI-net Echomail Network. Free Internet Email address with subscriptin. Home of TextView, BBSList, DDoor, ATSend, DayBat and other programs. All lines answered by 486-SX or better and 21.6K USR Dual Standards. PC-Catalog!

Alaska Information Cache (907)373-3205 Wasilla, Alaska since 01/01. Sysop: Robert Southwick. Using MajorBBS 6.1 with 2 lines on MS-DOS 80386 with 345 MB storage. Wang at 2400 bps. No fee. Alaska Information Cache is an infotainment Board. The main theme is travel related info for the state of Alaska. A wide variety of Forums mostly with an Alaskan outlook. modems have error correction and compression. (V.32 MNP5) 8N1

Isle-Net (908)495-6996 North Middletown, New Jersey since 10/84. Sysop: Dan. Using TBBS 2.2 with 12 lines on MS-DOS 80386 with 244 MB storage. US Robotics at 14400 bps. $45 Annual fee. Internet mail, Usenet newsgroups, erotic fantasies written by members. Free chat on your first call! Challenging games, lots of files to download. Stop by and have your Tarot cards read online. We do it better because we've done it since 1984!

The Underground BBS (908)914-2221 Beachwood, New Jersey since 12/86. Sysop: Sir William. Using MajorBBS 6.12 with 24 lines on MS-DOS 80486 with 4000 MB storage. US Robotics at 14400 bps. $5 Monthly fee. The ORIGINAL Underground, one of NJ's biggest and most popular systems. RIPgraphics, 4 CD Roms, Killer ANSI, XXX Adult Available, Global Commands and Actions, online DOORS, Mall, multiplayer teleconference games including TeleArena. It's worth the trip.

Bits and Bytes BBS (909)356-4636 Fontana, California since 09/91. Sysop: Barly Redsar. Using PCBoard V15.1 with 7 lines on MS-DOS 80486 with 9000 MB storage. US Robotics at 21600 bps. $43 Annual fee. BEST BBS around! You do not believe us? Well call and find out for yourself! How can you go wrong? Over 55000 files online (every week we have 500 new files), 60 Door games, 700 conferences (RIME, U'NI, Rosenet, & Throbnet). Large ADULT ONLY GIFs.

NightVision (909)369-6556 Riverside, California since 11/93. Sysop: John Williams. Using WildCat 3.90 with 8 lines on MS-DOS 80486 with 8000 MB storage. US Robotics at 14400 bps. $69 Annual fee. Massive library of Adult GIFs and Text Files, Monthly Amateur Contests, Live Group and Private Chat, Online Games, Matchmaker Database, E-Mail. Setting the Standard for Adult Entertainment.

Legend Graphics OnLine (909)689-9229 Riverside, California since 11/91. Sysop: Joey Marquez. Using PCBoard 15 with 12 lines on LAN Network 80486s with 6000 MB storage. US Robotics at 14400 bps. $5 Monthly fee. Nation's One Stop Graphics BBS! You will be impressed! Huge Adults Only File Areas! Simply the BEST in Southern California! SuperVGA Photo Images, Video in Motion MoviePICs! Visa MC AmExp Optima accepted.

The Erotic Shopping Network (913)780-0005 Olathe, Kansas since 04/93. Sysop: Dave McVey. Using MajorBBS 6.1 with 2 lines on MS-DOS 80386 with 485 MB storage. Zoom at 9600 bps. No fee. The first BBS of its kind in the U.S. On-line Adult shopping system featuring XXX videos, exciting lingerie, massage oils and lotions, condoms, marital aids and adult novelties. Catalogs available in hardcopy. MC, VISA welcome. Must be 18 or over.

The Tagline BBS (914)666-2549 Chappaqua, New York since 01/94. Sysop: Ezra Goldschlager. Using WildCat! 3.90S with 1 line on MS-DOS 80486 with 200 MB storage. US Robotics at 38400 bps. No fee. Featuring 640+ Megs of files! Sports Line for scores of most sports. FULL FREE ACCESS! D/L 1.5 Megs a day, with 2 hours! Carrying 1 LostNet confrence. InterNet E-Mail and UseNet newsgroups coming soon! The ONLY choice!

ExecNet (914)667-4567 Mount Vernon, New York since 11/85. Sysop: Andy Keeves. Using PCBoard 15.0 with 20 lines on MS-DOS 80386 with 14000 MB storage. US Robotics at 19200 bps. $Fee Flexible fee. Bringing you the world. Free online eval. time. 8 hrs/call, up to 32MB download/call. 90K+ files, 4K Int'l confs., Usenet/Internet, Immediate access with major credit card, Fantasy Area. Email to/from Compuserve, MCI. 10MB+ new files daily.

My Favorite BBS (916)381-2851 Sacramento, California since 10/91. Sysop: Kevin King. Using WildCat 3.9M with 1 line on MS-DOS 80386 with 680 MB storage. PP at 14400 bps. No fee. Helping Sysops, Computer Resellers, find sources for BEST prices, Hardware & Software in USA. Starting a Computer Biz? Call, D-L: RESALE94.ZIP, or write: Disk-Count Data, PO Box 277482, Sacramento, CA 95827-7482. Send $1.00 for 3.5 disk.

For Adults Only BBS (916)962-3973 Sacramento, California since 01/88. Sysop: Dale DeBord. Using Oracomm-PLUS 7.1 with 17 lines on MS-DOS 80486 with 2000 MB storage. Practical Peripheral at 14400 bps. $14 Quarterly fee. Sacramento's largest and friendliest Adult CHAT/FILES System. Adult Message Bases, CHAT, GIF, GL, DL, FLI, Text and Game FILES. FREE Member GIFs. DISCOUNT Member Plans for Students and Military. FREE 3-HOUR TRIAL PERIOD. DOWNLOAD ON FIRST LOGON!

Black Gold BBS (918)272-7779 Tulsa, Oklahoma since 06/81. Sysop: Michael Cline. Using PCBoard 15.1 with line on MS-DOS 80486 with 25000 MB storage. US Robotics at 57600 bps. $25 Annual fee. Full PageSat and Planet Connect! 25+ gigs, USAToday, Over 100 Doors, Full time SYSOP's and much much more. Many free aeditreas and files with 45 minutes free access per day. 225 file areas and over 200,000 zip files. Customer support.

Micro Message Service (MMS) (919)779-6674 Raleigh, North Carolina since 10/82. Sysop: Michael M. Stroud. Using TBBS 2.2 with 10 lines on MS-DOS 80486 with 12000 MB storage. US Robotics at 19200 bps. $45.00 Annual fee. NC's # 1 online info service support for PC, Mac, Amiga and Atari ST. Hundreds of new files added weekly. Expert leaders for each SIG. Authorized eSoft dealer, system design and TDBS programming. Give your online system a leading edge, call us first.

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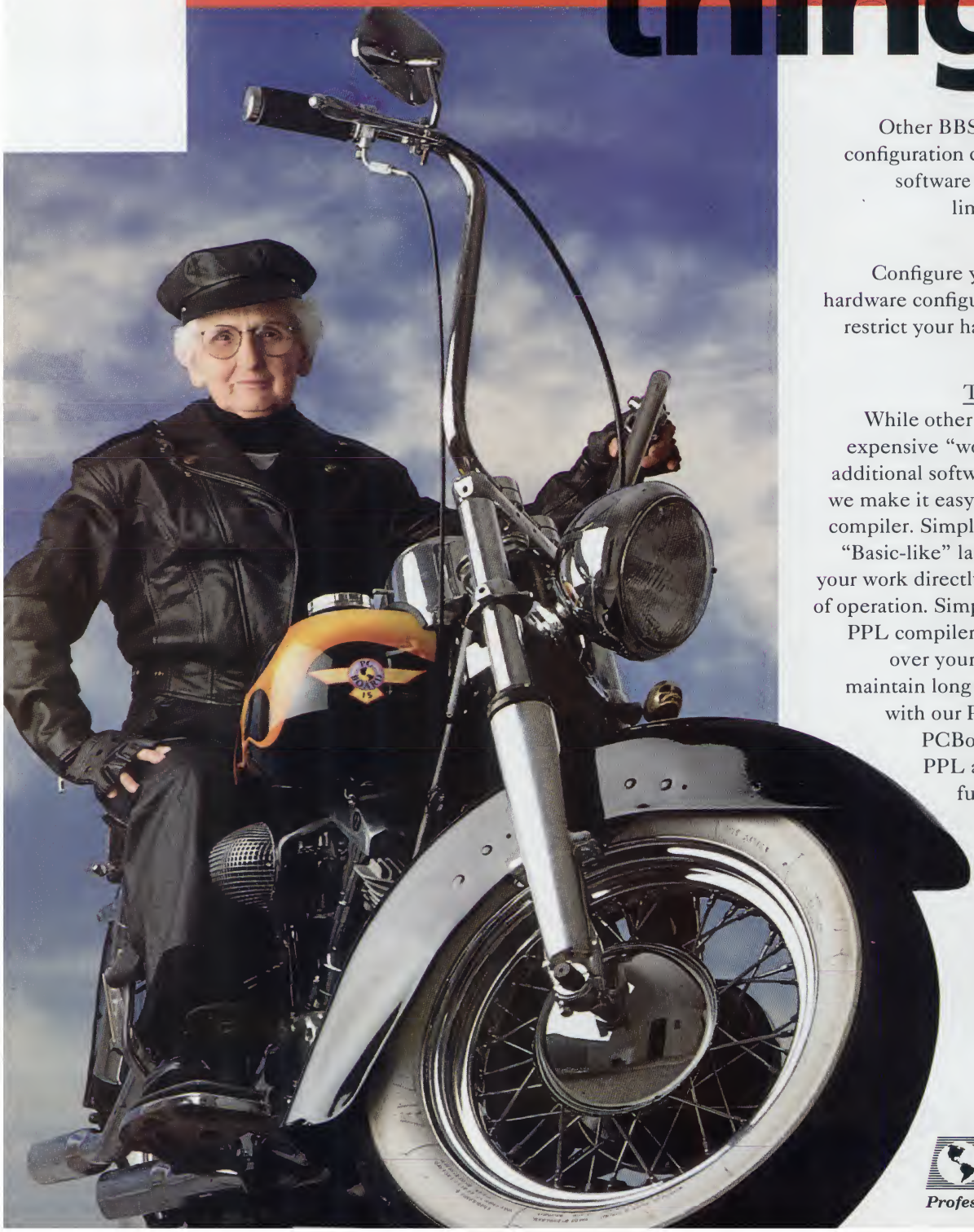

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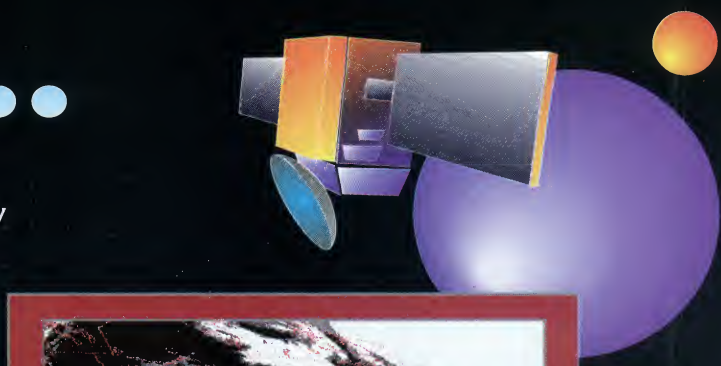

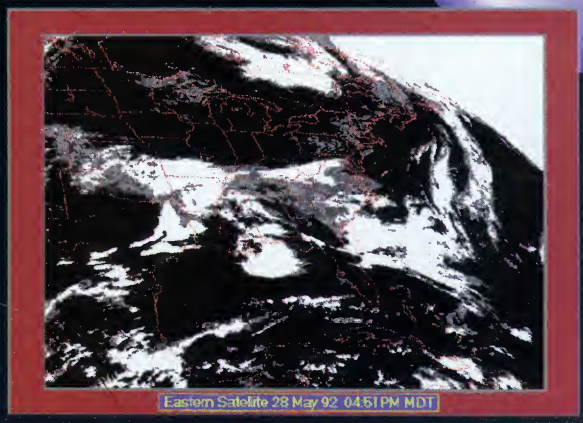

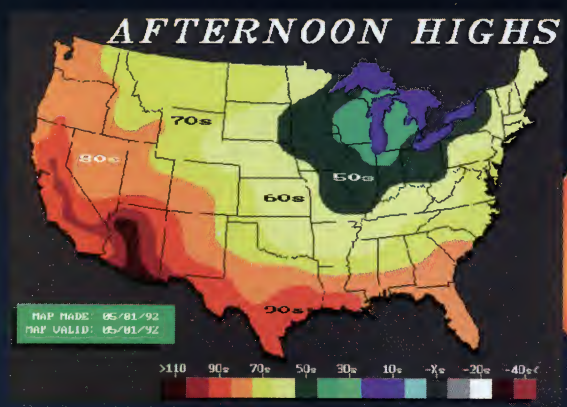

Some of the PLANET CONNECT DATA FEEDS:

RIME, Fido-Net (Conferences & File Areas), NaNet, Major Net, ILink, RoseNet, Intelec, U'n'Inet, Planet Earth, City 2 City, Microsoft, Echo-Net, SmartNet

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USA Today Decisionline
National TV Listings

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Availability of some Net material is suject to Net approvals. Membership in the Nets must be obtained through the Nets.

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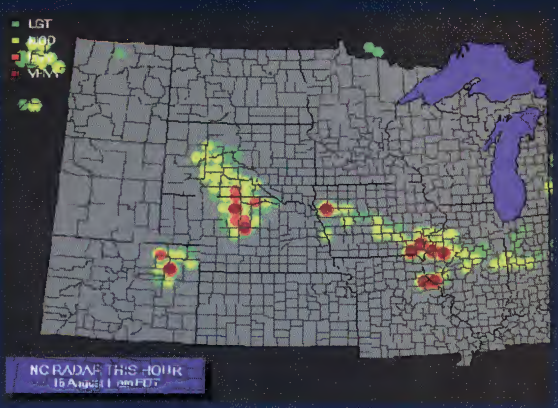

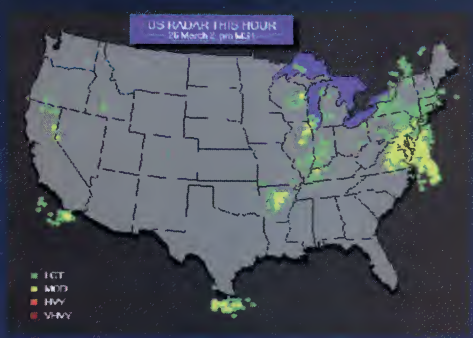

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BOARDWATCH MAGAZINE

NATIONAL LIST OF ELECTRONIC BULLETIN BOARDS AND ONLINE INFORMATION SERVICES - February 1994

SERVICE	PHONE	DESCRIPTION	SPONSOR/SYSOP	LOCATION
ADA 9X Project Bulletin Board	(800)232-9925	ADA Programming Language Revisions and News	Chris Anderson/Susan Carlson	Eglin AFB ,FL
ADA Information Clearinghouse	(703)614-0215	Information on ADA Programming Language/Military Specs	Department of Defense	Washington ,D.C.
Advanced Data Services Inc.	(301)695-9116	22 line PCBoard with 5.5 GB of Files	Blaine Brodka	Frederick ,MD
Alamo PC Organization	(210)496-5558	Numerous Files, Info	Robert Schoenert	San Antonio ,TX
Albuquerque ROS	(505)299-5974	36000 files/USA Today/Tradewars/Online Games	Steven Fox	Albuquerque ,NM
America's Suggestion Box	(516)471-8625	BBS Devoted to Collecting and Distributing Consumer Feedback	Joseph G. Jerszynski	Ronkonkoma ,NY
American Cybernetics BBS	(602)968-1082	Multi-Edit Product Support BBS	American Cybernetics	Tempe ,AZ
ANARC BBS	(913)345-1978	World Radio/TV Handbook - Short Wave Freq Lists/Scheds.	Assoc. of North American Radio Clubs	Shawnee Mission ,KS
APCUG - GlobalNet	(408)439-9367	Association of PC User Groups - Over 2000 UG officers	Paul Curtis/APCUG	Scotts Valley ,CA
Applied Modeling Research RBBS	(919)541-1325	Environmental Protection Agency Atmospheric Models	William Peterson/EPA	Hurdle Mills ,NC
Aquila BBS	(708)820-8344	6 GB 25 Nodes Fidonet/Interlink/Metronet MCe IL/CHI Graphics	Kevin Behrens/Steve Williams/Doug Bell	Aurora ,IL
Argus Computerized Exchange	(617)674-2345	Multiline Community Chat Service - Restuarant Review dbase	Pam Morrison	Lexington ,MA
AST Technical Services BBS	(714)727-4723	Superb support system for AST Computer Products	AST Research Inc.	Irvine ,CA
AT&T Support BBS	(908)769-6397	Support for PC 6300 and Other AT&T PC Models	American Telephone/Telegraph PC Division	Plainfield ,NJ
ATI Support BBS	(416)756-4591	Support for ATI Modems and Video Cards	ATI Technologies	Scarborough ,Ontario
Atomic Cafe BBS	(713)530-8875	Houston Area BBS list and Connect! Magazine	David Wachenschwanz	Houston ,TX
Atri BBS	(903)758-2784	4 Gigs Online All Fidonet Message areas Over 200 door games	Walter Cade	Longview ,TX
Attention to Details	(909)681-6221	Utilities/ASP/Patriquin Utils/Protocols	Clint Bradford	Mira Loma ,CA
Audiophile Network	(818)988-0452	High-end Audio Components, Music, Video Reviews	Guy Hickey/Quatre Speakers	Van Nuys ,CA
Automobile Consumer Services	(513)624-0552	New Car Pricing Reports - Used Car Value Reports	Automobile Consumer Services Inc.	Cincinnati ,OH
AviTechnic 1:261/662	(301)252-0717	Software Distribution System - BBS Utilities	Tom Hendricks	Lutherville ,MD
BBS America	(214)680-3406	Home of DFW Online Electronic Newsletter	Jay Gaines	Richardson ,TX
BCS BBS	(213)962-2902	Los Angeles' First Super BBS Under Development	Jim Lee	Los Angeles ,CA
BCS IBM BBS	(617)964-2540	IBM PC Topics - TBBS Software (Internet)	Boston Computer Society/Martin Hannigan	Boston ,MA
BCS Info Center BBS	(617)621-0882	General Topics - TBBS - Internet Mail	Boston Computer Society/Martin Hannigan	Boston ,MA
BCS Mac BBS	(617)864-0712	Macintosh Topics - Firstclass BBS Software	Boston Computer Society/Martin Hannigan	Boston ,MA
Beach Board BBS 1:371/1	(813)337-4950	Over 100 online games - Internet Mail - 8 lines - 48000 fls	Dave Ward	Fort Myers ,FL
Beyond Eternity	(310)371-3734	Home of EEEK! Bits - Weekly Electronic Trivia Magazine	J. Black/K. Taghadossi	Torrance ,CA
Beyond the Realm	(805)987-5506	200+ message areas 60+ file areas Fidonet VNet Adult Topics	Lee Ladisky	Camarillo ,CA
BMUG BBS	(510)849-2684	Support for Macintosh owners - files - conferences.	Berkeley Macintosh Users Group	Berkeley ,CA
Boardwatch Magazine Online Info	(303)973-4222	Distribution Service for USA Today/Boardwatch/Newsbytes	Boardwatch Magazine	Littleton ,CO
Book BBS	(215)657-6130	Information on 2000 Computer Books - 800 order number	Business & Computer Book Store	Willow Grove ,PA
Book Stacks Unlimited	(216)694-5732	200,000 Book Titles Database - Online Ordering	Charles Stack	Cleveland ,OH
Borland Download BBS	(408)431-5096	Utilities, Macros, Programming Examples for Borland Products	Borland International/Mike Fitz-Enz	Scotts Valley ,CA
Botnay Bay EIS	(603)431-7229	20 GB of Files - Adult areas - BBS Lists	Myles Bratter	Portsmouth ,NH
Boundary Waters BBS	(218)365-6907	Canoe Trips/Resorts/Fishing/Wilderness in Minnesota	Gary Knopp/InfoNorth	Ely ,MN
Bruce's Bar & Grill	(203)236-3761	24-line Social System - Chat - Games - Downloads	Bruce Lomasky	West Hartford ,CT
Bryant Software	(303)733-0773	Support & Demo of Bryant Software & TBBS Products	Alan Bryant	Denver ,CO
C.A.R.L Library Service	(303)758-1551	Citations to 4 Million Texts in Colorado Library System FREE	Colorado Alliance of Research Libraries	Denver ,CO
CAD/Engineering Service	(615)822-2539	Computer Aided Design File Distribution Network 1:116/32	Stan Bimson	Hendersonville ,TN
Canada Remote Systems	(416)213-6003	23GB/400000+ files, 3500 Conf's,USENET, IBM/Amiga/Mac	Neil Fleming/Jud Newell	Mississauga ,Ontario
Capital PC User's Group BBS	(301)738-9060	One of the oldest PC User's Groups - 5500 members	Capital PC Users Group/Roger Fajman	Rockville ,MD
Castle Tabby 107/412	(908)988-0706	Home of TABBY Fidonet Interface Program for Apple Macintosh	Michael E. Connick	Bradley Beach ,NJ
Caverns of the Abyss	(405)482-2980	4 Gigs Online CD Roms	Shannon Graham	Altus ,OK
CBBS/Chicago	(312)545-8086	First Electronic Bulletin Board - Since 2/16/78	Ward Christensen/Randy Suess	Chicago ,IL
Celebration Station	(207)374-5161	Adventure Games, Chat, and Sigs - Children	Noel Stookey (Paul of Peter,Paul & Mary)	Blue Hill Falls ,Maine
Central Point Software	(503)690-6650	PC Tools - Central Point Anti-virus support board	Central Point Software Inc.	Beaverton ,OR

Channel 1	(617)354-8873	70-line PCBoard - 8 GB Files - Internet - 1000's msg. confs.	Brian Miller/Tess Heder	Cambridge ,MA
Chicago SysLink	(708)795-4442	Special Interest Areas for Ferret/Pet Owners.TRS80/Aviation	George Matyaszek	Berwyn ,IL
Chinet	(312)283-0559	UNIX System offering Internet Mail	Randy Suess	Chicago ,IL
City Lites PCBoard	(701)772-5399	9 GB files, Rimenet, Internet, FidoNet, ASP, Online Orders	John Lundell	Grand Forks ,ND
City Online	(909)860-Line	City Government BBS Rip/Internet & more	Troy Butzlaff	Diamond Bar ,CA
Classi Computer Fieds	(317)359-5199	Online System for Classified Advertisements	Steve Edsall/Trader Newspaper	Indiannapolis ,IN
Classified Connection BBS	(619)566-7347	Giffy Girls - Nude GIF Images of the Girl Next Door	Bill Kennon	San Diego ,CA
Cleveland Freenet	(216)368-3888	Cleveland City Info/Public Library - Free Internet Mail Box	Case Western University/AT&T/Ohio Bell	Cleveland ,OH
Cloud Nine	(713)855-4382	15 meg, 30 Nodes	Harold Lucas	Houston ,TX
Colorado Connection	(303)423-9775	Breeding, Raising, Taming, Exotic Birds	Terry Rune/Dave McClauggage	Arvada ,CO
Community News Service (CNS)	(719)520-5000	News and Entertainment - 17 Lines Community Focus	Klaus Dimmler	Colorado Springs ,CO
Compact Audio Disk Exchange	(415)824-7603	Buy/Sell/Trade Compact Audio Disks Online	Wayne Gregori	San Francisco ,CA
Computer Business Services	(909)396-0014	Book/Publishing Consultant John C. Dvorak & Nick Anis' BBS	Nick Anis Jr.	Diamond Bar ,CA
Computer Garden	(301)546-1508	Treasure Hunting - Metal Detectors - Online Catalog	Milford P. Webster	Salisbury ,MD
Computing Canada Online	(416)497-5263	Adjunct to Excellent Canadian PC Newspaper	Computing Canada Newspaper	Willowdale ,Ontario
Crosstalk Communications BBS	(404)740-8428	Product Support for Crosstalk for Windows/MK4/XVI	Digital Communications Associates	Roswell ,GA
Cul-de-Sac Bar & Grill	(508)429-1784	Multiline Service - Ham Radio - Humor - TDBS Applications	Pete White	Holliston ,MA
CyberStore - a COCONET BBS	(604)526-3676	All lines to v.32bis/v.42/v.42bis. CyberTools for BBS'es	CyberStore Online Info. Systems Inc.	New Westminster ,BC
DAK Online Resource Center	(818)715-7153	DAK Mail Order Catalog - Breakmakers - CD ROMS - Computers	DAK Industries/Tom Krogh	Canoga Park ,CA
Dark Side of the Moon	(408)245-7726	Home of WAFFLE, Unix UUCP BBS Software for DOS and UNIX	Thomes E. Dell/Darkside International	Mountain View ,CA
Data Bank	(913)842-7744	Information HQ, Support Board, Net-Mail & Files	Bob Oyler	Lawrence ,KS
Data Core BBS	(310)842-6880	25 line Major BBS	Matthew Schoen/Delta Enterprises	Los Angeles ,CA
DataLink RBBS System	(214)394-7438	Weather Satellite Imaging, NOAA Satellite Tracking-AMSAT-NA	Dallas Remote Imaging Group/Jeff Wallach	Carrollton ,TX
Dawg Byte	(615)385-4268	ANSI Art Club 1:116/29	Kevin Snively	Nashville ,TN
Deep Cove BBS	(604)536-5885	16 line TBBS, 3500 MBytes files for IBM, MAC, Amiga	Wayne Duval	White Rock ,BC
Denver Exchange, The 104/909	(303)623-4965	Denver's Most Diverse Gay/Lesbian Info Service	James Craig	Denver ,CO
Denver Free-Net	(303)270-4865	Free Community Online Service - Health Info	University of Colorado Health Science	Denver ,CO
Distant Mirror BBS	(615)648-1782	Free Access BBS	Steve Perlo	Clarksville ,TN
Distributed Info Service	(718)727-1456	Information Service	Joseph Bianco	Staten Island ,NY
DNIS	(619)864-1468	Outstanding BBS Gateway to multiple information services	Mike Simmons	Palm Springs ,CA
Duke Graphics of San Diego	(619)793-8360	7 CD Roms Online, 4 gigs 50,000 files	Chris Duke	San Diego ,CA
EarthArt BBS	(803)552-4389	Wildlife/Conservation Art Gallery GIF Images	Ambassador Wildlife Gallery/Bob Chapman	North Charleston ,SC
Ed-Net	(604)732-8877	Vancouver School Board Multi-Line Educational Network	Barry Macdonald/Vancouver Board of Ed	Vancouver ,BC
Electric Ideas Clearinghouse	(206)586-6854	Energy Efficiency Efforts In Pacific Northwest-HydroElec	Bonneville Power Administration WSE	Olympia ,WA
Electronic Publishers BBS	(503)624-4966	News-Finance-Sports-Games-2GB File Library	Brian Cash	Portland ,OR
Electronic Zone, The	(412)349-3504	Specializing in Hypertext	William R. Forbes	Indiana ,PA
Energy Info Admin E-Publications	(202)586-8658	Variety of Petroleum/Coal/Electricity Energy Statistics	US Department of Energy	Washington ,D.C.
Entertainment & Graphics	(503)697-5100	Entertainment & Graphics	Jim Maxey	Lake Oswego ,OR
eSoft Product Support BBS	(303)699-8222	Home of The Bread Board System (TBBS) BBS Software	Phil Becker/eSoft Inc.	Aurora ,CO
Event Horizons	(503)697-5100	64 Line Digitized Graphics Image Library - Adult .GIF files	Jim Maxey	Lake Oswego ,OR
EXEC-PC	(414)789-4210	Largest BBS in US - 280 Lines -650,000 files - 35 Gigabytes	Bob and Tracey Mahoney	Elm Grove ,WI
Executive Network	(914)667-4567	Interlink Netmail National Host - Multiline PCBoard System	Andy Keeves	Mt. Vernon ,NY
Eye Contact BBS	(415)255-5972	22 line Oracomm - Gay Issues - Popular Chat System	Bill Montgomery	Mill Valley ,CA
Falken Support BBS	(703)803-8000	Support for FALKEN software - 16 lines - doors - chat	Herb Rose	Woodbridge ,VA
Farwest BBS	(604)381-3934	Large Western Canada Galacticomm Info System	Ren L'Ecuyer	Victoria ,BC
FAX/Satellite Services BBS	(619)224-3853	NOAA Weather Satellite Images - Russian/Japanese Sat Pics	Scotty Olson	San Diego ,CA
FCC Public Access Link	(301)725-1072	Equipment Authorization Status Advisory Service	Federal Communications Commission	Columbia ,MD
FEDLINK ALIX II	(202)707-4888	Info on Federal Libraries -Excerpts Library of Congress News	Federal Library Information Network	Washington ,D.C.
Fido Tech Stand	31-30-735900	Fidonet Technical Information for Holland	J.J. van der Maas	Utrecht ,Holland
Fire & Ice	(313)373-8608	A Family BBS With Christians Discussions	William Sims	Drayton Plains ,MI
Fisherman's Net	(614)837-0400	Dedicated to Fisherman	Lloyd Davidson	Carroll ,OH
FOG City BBS 125/10	(415)863-9697	Gay Community BBS - AIDS Info - Desktop Publishing - MACs	Bill Essex	San Francisco ,CA
Foundation Online Service	(203)968-8752	15+ Gigs 8 Lines Internet	David Deutsch	Stanford ,CT
Fred the Computer	(508)872-8461	Newspaper BBS. Wierdnet Newswire. List of MA Libraries	Middlesex News-Adam Gaffin	Framingham ,MA

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BOARDWATCH MAGAZINE

NATIONAL LIST OF ELECTRONIC BULLETIN BOARDS AND ONLINE INFORMATION SERVICES - February 1994

SERVICE	PHONE	DESCRIPTION	SPONSOR/SYSOP	LOCATION
FreeBoard BBS, The	(804)744-0797	Desktop Publishing File Distribution Network 1:264/212	Bill Hunter	Midlothian ,VA
Fun Connection	(503)753-8431	Multiline Entertainment - 8 Lines Games/Chat/News	Vincent Reece	Corvallis ,OR
Galacticomm Demo System	(305)583-7808	Customer support for Major BBS	Galacticomm	Fort Lauderdale ,FL
Garbage Dump	(505)294-5675	Hottest Chat in America - National Access $1.75 per Hour	Dean Kerl & Simon Clement	Albquerque ,NM
Gateway Communications BBS	(714)863-7097	Novell Netware/TCP-IP Shareware Utilities	Carol De Jesus	Irvine ,CA
Gateway On-Line	(313)291-5571	Interactive Chat,MulitiplayerGames,Usenet/Internet,E-mail	Jeff Breitner/Bill Mullen	Rockwood ,MI
GDP Technologies	(303)673-9470	Outstanding IBM Shareware on a small system	Tom Getty's	Lafayette ,CO
General, The	(619)281-8616	Popular File Library - GIF Images	Marc Teitler	San Diego ,CA
GISnet BBS	(303)447-0927	Graphics Information Systems/Mapping topics	Bill Thoen	Boulder ,CO
GLIB	(703)578-4542	Gay and Lesbian Information Bureau - 11 Lines - 9600 bps	Community Educational Svcs. Foundation	Arlington ,VA
GPO WINDO Online Service	(202)512-1387	Fed Information from EPA, DOE, State Department - others.	US Government Printing Office	Washington ,DC
Greenpeace Environet	(415)512-9108	Ecological and Peace Issues - Disarmament/Toxics/Wildlife	Dick Dillman/Greenpeace	San Francisco ,CA
Hackers R Us Online	(602)945-8416	Online Games, Files & Tech Discussions	David Ray	Scottsdale ,AZ
Hackers World BBS	(309)672-4405	Adult Files, Fidonet Echo-Mail Adult-net	Martin Belcke	Peoria ,IL
Harris City Medical BBS	(713)790-1093	Medical Information	Monica Faulk	Houston ,TX
Hayes Advanced Systems Support	(800)874-2937	Customer Support Line for Hayes Customers. V-series/Ultra	Hayes Microcomputer Products	Norcross ,GA
Heartland Free-net	(309)674-1100	Community Online Service - Free Internet E-Mail Boxes	Peoria County Board/Bradley University	Peoria ,IL
Herpnet/Satronics TBBS	(215)698-1905	Reptile and Amphibian Studies - Poison Snakes/Toads/Fish	Mark Miller	Philadelphia ,PA
HH Info-Net BBS	(203)246-3747	MS Windows and OS/2 Files our specialty	Lee Winsor	New Hartford ,CT
HoloNet	(510)704-1058	National Access,INTERNET,USENET,CHAT,GIFS,FILES	Information Access Technologies, Inc.	Berkeley ,CA
HouseNet BBS	(410)745-2037	Home Fixup/Repair/Renovation Tips, Advice, and Articles	Gene and Katie Hamilton	St. Michaels ,MD
Howard's Notebook 1:280/25	(816)331-5868	Environmental, Peace, Justice since 1982 - 4 nodes	Jim Howard	Kansas City ,MO
Hysterics	(613)231-7144	Amiga File Distribution Network 1:163/109	Russell McOrmond	Ottawa, Ontario ,
IBM National Support Center BBS	(404)835-5300	IBM PC User Groups Database - Newsletter Exchange	IBM National Support Center	Atlanta ,GA
Inbound/Outbound/Teleconnect	(212)989-4675	Telephone Sales Trade Magazine Online Service	Harry Newton Publications	New York ,NY
Index Systems	(404)924-8414	Excellent list of Atlanta BBS systems online	Rodney Aloia	Marietta ,GA
Infinite Space Online	(407)856-0021	32 Line Interactive Chat & Games Majornet	Charlie Scherker	Orlando ,FL
InfoHost Demo BBS	(201)335-2253	Demo BBS for InfoHost BBS Software - Multiline - Database	A-Comm Electronics Inc.	Hasbrouch Heights ,NJ
Inns of Court, The	(214)458-2620	LAN Related Files and Utilities 1:124/6101	Arthur Geffen	Dallas ,TX
Intel PCEO Support BBS	(503)645-6275	Support for Intel PC Products - Inboard 386/AboveBoard 286	Intel Corporation PCEO Division	Hillsborough ,OR
Inter Comm	(702)359-2666	6 Line 5.5 Gig 30,000 Files	Roger Brown	Spark ,NV
InterMail Tech Support BBS	(305)436-1884	Home of InterMail, Front End Mailer for FidoNet 1:369/102	Patrik Bertilsson	Hollywood ,FL
Invention Factory	(212)274-8110	46 Lines - 100 Directories - Full Usenet Feed - 8.2 GB	Mike Sussell	New York ,NY
Investor's Online Data	(206)285-5359	Online Investment/Stock Market Information/Tech Analysis	Don Shepherdson	Bellevue ,WA
JDR Microdevices BBS	(408)559-0253	Online Hardware Order - Catalog - 1.1 GB Files - Quizzes	JDR Microdevices	San Jose ,CA
JOBBS	(404)992-8937	Online Job Listings - 2186 Technical Pos. - 10,000 Corps.	Alpha Systems Inc./Bill Griffin	Roswell ,GA
Keith Graham Shareware Support	(914)623-0039	OPTIK, TEXT2COM, CBOOT, very good shareware utilities	Keith P. Graham	Nyack ,NY
KIMBERELY BBS	(612)340-2489	Prime Rate-Fed Funds-T-Bill-Discount Rate-Economic Data	Federal Reserve Bank of Minneapolis	Minneapolis ,MN
King's Market BBS 104/115	(303)665-6091	400 MB Books, Writers Area - TRS 80 Support	Jim and Karen Burt	Boulder ,CO
Knight Vision BBS	(213)344-3600	Chess and Backgammon - 8 lines - "Intelligent Entertainment"	Matthew Beelby	Pasadena ,CA
Lace's Place	(718)822-3552	Female Domination Adult BBS online since 7/91	Ellen Grogan	New York City ,NY
LANtastic BBS	(602)293-8065	Support for LANtastic local area network	Artisoft Inc.	Tucson ,AZ
Late Night Software 125/555	(415)695-0759	Home of UFGATE - Software to connect PCs to UUCP/Usenet	Tim Pozar	San Francisco ,CA
LegalEase	(509)326-3238	Legal issues/Forms - Law BBS List	Bill Sorcinelli	Spokane ,WA
LICA Limbs BBS	(516)561-6590	Member written software PC Board 15.0 USR HST Since 1980	Dave Minott	Valley Stream ,NY
Lincoln Cabin BBS	(415)752-4490	General Interests & Rime	Steve Pomerantz	San Francisco ,CA
MAC-LINK	(514)486-8959	Macintosh Oriented Support BBS - 6 Lines - Infomat/BIX	Mark Smith	Montreal ,Quebec

Macalot Bulletin Board	(412)846-5312	Support for Second Sight BBS Software for Macintosh	Jeff Dripps/FreeSoft Company	Beaver Falls ,PA
MacCircles	(303)526-2219	Mac System Software distributor, mail, sigs, files	Patricia O'Connor	Golden ,CO
MacInternational	(803)798-3755	Macintosh support since April '85. FirstClass BBS	Ralph Yount	Columbia ,SC
Magpie BBS	(212)420-0527	Support/Demo System for Magpie BBS/Conferencing Software	Steve Manes	New York ,NY
MaxiHost Support BBS	(209)836-2402	MaxiHost BBS - small, very easy to run BBS	Don Mankin	San Ramon ,CA
Mayan Antiquities	(214)691-1316	Mayan Culture and Antiquities	Ron Whipple	Dallas ,TX
McAfee Associates BBS	(408)988-4004	Computer Virus Information - VIRUSCAN and CLEANUP	John McAfee/CVIA	Santa Clara ,CA
Med Technet	(716)688-1552	A BBS for Medical Info	Bill Hliwa	East Amherst ,NY
Meeting Works, The	(212)737-6932	Meeting/seminar/convention planning information.	John Mackenzie	New York ,NY
METRO Online Entertainment	(212)831-9280	32 line DLX with City Guide/Ski Database - Matchmaker - Chat	Bruce Kamm/Metro Online Services	New York City ,NY
Micro Foundry, The	(415)598-0398	2.2 GB Downloads - Your Online Software Source - Boardwatch	Thomas Nelson/Clockwork Software	San Jose ,CA
Micro Message Service	(919)779-6674	USA Today/Boxoffice Magazine - Large Download Area	Mike Stroud	Raleigh ,NC
Microrim Technical Support BBS	(206)649-9836	Support for Popular R:Base Relational Data Base System	Microrim Corporation	Redmond ,WA
Microsoft Download BBS	(206)936-6735	Windows Technical Notes and Support Information	Microsoft Corp/Scott J. Honaker	Bellevue ,WA
Microsystems Software Inc.	(508)875-8009	HandiWare Software for Handicapped - CodeRunner C Utilities	MSI - Reed Lewis	Framingham ,MA
MindVox	(212)989-4141	Internet Access, E-Mail, Newsgroups, ftp/telnet	Phantom Access Technologies	New York ,NY
Minnesota Spacenet	(612)920-5566	Minnesota Space Frontier Society - NASA News	Ben Husset	Minneapolis ,MN
MOG-UR'S EMS, The	(818)366-1238	5 Lines - 8 Networks CD-ROMS - 2.8 GB Hub Services HST/V.32	Tom Tcimpidis	Granada Hills ,CA
Monterey Gaming System	(408)655-5555	A Custom Multi-user BBS with Conferencing and Custom Games	David Janakes	Monterey ,CA
Mountain Air BBS	(703)427-0226	Adult Based BBS	Edward Lee Wood, Jr.	Roanoke ,VA
Movie BBS	(718)939-5462	Movie Reviews and Information - Television	Clarke Ulmer	New York ,NY
Mustang Software	(805)873-2400	Support for Mustang Software Products	MSI Sysop	Bakersfield ,CA
N.A.C.D. BBS	(912)246-3280	Cave Scuba Diving - Superb Special Topic System	National Assoc. of Cave Divers	Gainsville ,FL
N8EMR Ham BBS	(614)895-2553	login:hbbs HAM Radio/AMSAT Unix System - Satellite/Packet	Gary Sanders	Westerville ,OH
NAPLPS Graphics BBS	(613)727-5272	NAPLPS Graphics Terminal and Editor Software	MicroStar Corp.	Nepean ,Ontario
NASA Spacelink	(205)895-0028	NASA Educational Affairs Div. - Flight Data/Space History	Marshall Space Flight Center	Huntsville ,AL
Nashville Exchange	(615)383-0727	20 line TBBS - Games/TDBS Software Development 1.8 GB	Ben Cunningham	Nashville ,TN
National Genealogical BBS	(703)528-2612	Family History - Genealogical Research - Gravestone Haunting	National Genealogical Society	Arlington ,VA
Netcom Internet Guest System	(408)241-9760	Internet Access System - type "guest" at login for info.	Netcom Online Communications Services	San Jose ,CA
Network World Bulletin Board	(508)620-1178	LAN and WAN Issues and Technology	Network World Magazine	Framingham ,MA
Newbed	(506)453-2147	Educational System K12 Net	William Brydges	Fredeeriction ,NB
Newtown Express BBS	(215)943-6806	14.5 Gigs/700+Sigs 18 Lines Large Adult Section USA Today	Anthony Maglietta	Newton ,PA
Night Shift, The	(818)955-5155	16 lines/chat/Usenet Newsgroups/Internet Mail/USATODAY	Charles Hilt	Burbank ,CA
NIST ACTS	(303)494-4775	Automated Computer Telephone Service - Sync PC to NBS Time	Nat. Institute for Standards/Technology	Boulder ,CO
NOAA Space Environment Lab	(303)497-5042	Solar Flare/Geomagnetic Data Online	National Oceanographic/Atmospheric Admin	Boulder ,CO
NoGate Consulting	(616)530-3392	Home of PAK archive utility	Mike Neuhaus Gus Smedstad	Grand Rapids ,MI
North Castle BBS	(507)281-8292	Minnesotas #1 RPG BBS	Rob Richter	Rochester ,MN
O&E Online	(313)591-0903	Free Community BBS, Editorial Text from Newspapers	Greg Day	Livonia ,MI
OAQPSTTN	(919)541-5742	Air Quality Planning and Standards Technology Transfer Net	Environmental Protection Agency	Research Triangle Pk ,NC
OASIS BBS	(404)627-2662	Home of Atlanta Bulletin Board List - ABBL	Robert Orr/Online Atlanta Society	Decatur ,GA
Occupational Health/Safety BBS	(212)385-2034	Job Safety Issues for Artists, Musicians, Entertainers	Mike McCann/Center for Safety in Arts	New York ,NY
Odyssey	(818)358-6968	Adult Multiline Chat System - Games - Magazines - Downloads	Michael Allen	Monrovia ,CA
ODYSSEY	(818)358-6968	Largest Adult Based Entertainment Service In North America	Michael Allen	Monrovia ,CA
OERI BBS	(800)222-4922	Educational Statistics and Data - Performance Stats -	US Department of Education	Washington ,D.C.
Old Colorado City Communications	(719)632-4111	Political Discussions - Unix UUCP Public Access - Multiline	Dave Hughes	Colorado Springs ,CO
Online Now	(807)345-5522	Canada's shareware house is online now	Gary Walsh/Tom Haavisto	Thunder Bay ,Ontario
Online With Hayes	(404)446-6336	Hayes Public Bulletin Board - Conferences/SIGS/Support	Hayes Microcomputer Products	Norcross ,GA
Oracle PC	6108 260-6222	South Australian TBBS Multiline System	Don Crago	Pooraka South Australia ,
Oracomm Support BBS	(612)894-5879	Sales and Support for Oracomm Multiline BBS Software	Surf Computer Services	Minneapolis ,MN
Osprey's Nest	(301)989-9036	Birdwatching, Bird feeding, Naturalist/Ecology Issues	Fran and Norm Saunders	Colesville ,MD
Ozone Hole, The	(504)891-3142	Boardwatch-USA Today-Internet-Usenet-RIME	Mike Mathews	New Orleans ,LA
P.D.S.L.O. BBS	(516)938-6722	Home of THE LIST National BBS List	James Toro	Hicksville ,NY
PacComm BBS	(813)874-3078	Packet Radio Equipment Supplier - TNC/PSK Modems	Gwyn Reedy/PacCom Inc.	Tampa ,FL
PC Junction BBS	(615)478-2890	Smartnet Throbnet 100,000 Files & Online Magazines	Douglas Carpenter	Cleveland ,TN

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BOARDWATCH MAGAZINE

NATIONAL LIST OF ELECTRONIC BULLETIN BOARDS AND ONLINE INFORMATION SERVICES - February 1994

SERVICE	PHONE	DESCRIPTION	SPONSOR/SYSOP	LOCATION
PC Ohio	(216)381-3320	Shareware library with 100% USR HST access - 24 lines	Norm Henke	Cleveland ,OH
Pennywise	(800)752-3012	Online Office Supply Sales Service	Pennywise	Edmonston ,MD
PHYSICS Forum BBS	(413)545-1959	Physics and Astronomical Sciences	Univ.of Mass. Dept. of Physics/Astronomy	Amherst ,MA
Pinecliffe BBS 104/28	(303)642-7463	Large Shareware Library/Echomail Conferences since 1985	Craig Baker	Pinecliffe ,CO
Pinnacle Software BBS	(514)345-8654	Support for Sapphire BBS Software	Timothy Campbell/Pinnacle Software	Montreal ,Quebec
Pipeline, The	(209)592-9861	Construction topics for contractors, suppliers, public works	Michael W. Adams	Fresno ,CA
PKWare BBS	(414)354-8670	Home of PKZIP 1.10 Compression Utility	Phil Katz/PKWare Incorporated	Glendale ,WI
Planet Connect	(615)623-8111	National Weather Satellite & Radar Maps and Data Feeds	Planet Systems, Inc	Newport ,TN
Pleasure Dome	(804)490-5878	Sexually Explicit Fantasy Chat System - Adults only	Tom Terrific	Tidewater ,VA
Practical Peripherals BBS	(805)496-4445	Support BBS for Practical Peripherals Modems	Practical Peripherals	West Lake Village ,CA
ProComm Support BBS	(314)875-0503	Home of ProComm 2.4.3 and ProComm Plus Comm Prgrms	Thomas Smith/DataStorm Technologies Inc.	Columbia ,MO
Promised Land, The	(715)387-1339	16-Line/2.5GB/11,000+ Files/ WINDOWS, Chat & More	Tim Brown/Computer Solutions	Marshfield ,WI
Public Brand Software BBS	(317)856-2087	Commercial Shareware Vendor	Public Brand Software	Indianapolis ,IN
Public Connection	(817)738-7336	Public Files	Joe Coles	Ft Worth ,TX
QMail Deluxe Support BBS	(615)230-8822	Support for QMail Deluxe and 1stReader offline mail utils	Mark (Sparky) Herring	Germantown ,TN
Qualitas, Inc. BBS	(301)907-8030	386MAX and BlueMAX Memory Management Software Support	Qualitas Inc.	Bethesda ,MD
Quarterdeck BBS	(310)314-3227	Technical Support for QEMM, DESQview, all Quarterdeck Prods	Quarterdeck Office Systems	Santa Monica ,CA
QuickBBS Support BBS 363/34	(407)896-0494	Product Support for QuickBBS Software	Richard Creighton/Steve Gabrilowitz	Orlando ,FL
Random Access Information Svc.	(503)695-3250	11,000 GIF Images - 20,000 DOS/Windows Shareware Files	Janice Stevens	Corbett ,OR
RoboBOARD/FX	(819)682-7771	RoboBOARD Support 8 Lines	Hamilton TeleGraphics Inc.	Aylmer ,PQ
Ronin BBS	(214)938-2840	Traditional File and Message BBS	Chuck Mattern	Red Oak ,TX
Rose Media	(416)733-2780	19 GB - Home of Rosemail - Publications/Conferences	Vic Kass	Willowdale ,Ontario
Rusty & Edies	(216)726-0737	Large ML PCBoard run by Husband and Wife - NFL/Tradewars	Rusty and Edwina Hardenburgh	Boardman ,OH
Sahara Club BBS	(818)893-1899	Land-Use issues, Off-Road, Timber, Conservation	Patrick Martin/Sahara Club	North Hills ,CA
Salt Air BBS	(801)261-8976	Home of PCBoard BBS Software - National List of PCB Sys	Clark Development Company/David Terry	Murray ,UT
San Diego NeXT User's Group BBS	(619)456-2522	Support for NeXT Computers	Brian Dear/San Diego NeXT User's Group	San Diego ,CA
SBA Online	(800)697-4636	Advice for Small Business Owners on Financing/Management	Small Business Administration	Washington ,DC
Science Resource Studies BBS	(202)634-1764	Federal R&D Budget - Technical Labor Market Statistics	National Science Foundation	Washington ,D.C.
SDN Project, The 1:141/840	(203)634-0370	The Original Software Distribution Network	Ray Kaliss	Meriden ,CT
SEAboard!	(804)442-6047	Support system for ARC, SEADOG, and AXE software.	System Enhancement Associates	Nassawadox ,VA
Seagate Technical Support BBS	(408)438-8771	Installation and Specifications for Hard Drive Models	Seagate/Bill Rudok	Scotts Valley ,CA
Searchlight BBS	(516)689-2566	Support system for Searchlight BBS Software	Searchlight Software	StonyBrook ,NY
SemWare Support BBS	(404)641-8968	Home of QEdit - A Superb Shareware Text Editor	Sammy Mitchell/SemWare Software Products	Marietta ,GA
SENDIT	(701)237-3283	North Dakota K-12 Educational Net-telnet sendit.nodak.edu	Gleason Sackman/NDU	Fargo ,ND
SIGCAT BBS	(703)648-4168	CD-ROM /Optical Publishing Info - Lists of Gov. CD Data	SIG on CD-ROM Applications and Technol.	Gathersburg ,MD
Sistema Profesional Informacion	525 590-5988	Largest BBS in Mexico - Spanish Language TBBS	Tecnologia Uno Cero S.A. de C.V.	Mexico City ,
Skeleton Closet, The	(804)671-8547	Geneology Programs File Distribution Net 1:271/23	Debbi McKay	Virginia Beach ,VA
Society for Technical Comm. BBS	(703)522-3299	STC Job Service, Freelance Registry - Technical Writers	Society for Technical Communication	Washington ,D.C.
Software Creations BBS	(508)368-4137	Home of Apogee Software/Commander Keen Series	Dan Linton	Clinton ,MA
Sound Advice BBS	(816)436-4516	Twenty Line PCBoard with 2 Gigabytes Storage - HST Modems	Roy Timberman	Gladstone ,MO
Source for Source, The	(516)968-7824	Source code - large LINUX file collection	Erik VanRiper	Bay Shore ,NY
Space BBS	(415)323-4193	Multi Node BBS for Engineers	Owen Hawkins	Menlo Park ,CA
Spark*Net	(718)447-5544	Internet E-Mail, Worldlink, Chat, Games,Forums, Files	John Spark	New York City ,NY
Spectrum Online Systems	(719)576-6853	Graphics Based Service, Full Internet Access	Chris Phillips	Colorado Springs ,CO
Star-Link Network BBS	(718)972-6099	9-nodes, 2.1GB, Ilink, 75,000 programs	Michael Keylin	Brooklyn ,NY
Starlink BBS	(915)235-4818	Technical Support for Predictive Maint Customers	John Land	Sweetwater ,TX
StarLink Information Services	(502)969-8735	Online Travel Service, Internet Movie Reviews & Weather	Scott Goldbach	Louisville ,KY

State and Local Emergency Mgmt.	(202)646-2887	Hazardous Materials/National Dam Watch/Emergency Info	Federal Emergency Management Agency	Washington ,D.C.
Streame	(718)349-8137	Connecton to the World of New York Book Publishing	BookStreame	Brooklyn ,NY
Sun Valley Net	(208)726-1435	Information & Files on environment & outdoors	Stephen Schowengert	Ketchum ,ID
Superdemocracy Foundation BBS	(305)370-9376	Online Democracy/Political Culture for the Future	Tim Stryker	Davie ,FL
T-80 BBS	(403)246-4487	3.6 Gigs, 4 CD Roms 7,000 GIFS 20,000 Shareware Programs	Brian Simpson	Calgary ,AB
TAXACOM	(716)896-7581	Botany, Herbaria, FLORA ONLINE Newsletter, Latin Translation	Clinton Herbarium, Buffalo Museum	Buffalo ,NY
TEAMate Unix Bulletin Board	(310)318-5302	Demo/Support for TEAMate BBS Software for Unix	Bob Baskerville/MMB Development Corp.	Manhattan Beach ,CA
Telebit Support BBS	(408)745-3229	Support for Telebit Modems	Telebit Corp.	Sunnyvale ,CA
Telegodzilla	(503)621-3746	Home of ZModem File Transfer Protocol/YModem/YAM	Chuck Forsberg/Omen Technology Incorp.	Portland ,OR
Telepath	(415)358-8641	DBMS/Dr. Dobbs Journal Magazine Online Service	M&T Publishing	Redwood City ,CA
Telix Support BBS	(919)481-9399	Support Service for Telix Communications Software	Jeff Woods/deltaComm Development	Cary ,NC
The Back Room	(718)849-1614	America's Largest Exclusively Gay DB - Home of Gaycomm	Fred Kohn	Richmond Hill ,NY
The Business BBS	(619)576-0049	Business Related Files & Info	Doug Rowan	San Diego ,CA
The Business BBS	(310)477-0408	Utilities/Support for Microsoft Windows	Jim Appleby	Los Angeles ,CA
The Club House BBS	(908)272-2073	ADA, OSHA, RTN, 18 CD Roms Online & 30+ Games	George Porcella	Cranford ,NJ
The Eastside BBS	(407)337-1274	Family Oriented BBS Files, Conferences and Online Games	David Lane	Port St Lucie ,FL
The Electronic Grapevine	(707)257-2338	Local Online Message and Info Provider, Rime Node	Dick Wolff	Wapa ,CA
The File Bank	(303)534-4646	16 Line File Library - Radio Comm/Astronomy - USA Today	Girard Westerberg/Brian Bartee	Littleton ,CO
The Hot Heart of Tennessee	(615)890-8715	Home of hot programs, supports PC, Amiga	Larry Reeves	Murfreesboro ,TN
The Ledge PCBoard	(818)896-4015	Home of Textview Door for PCBoard Systems	Joseph Sheppard	Tujunga ,CA
The Liberty BBS	(714)996-7777	Nation wide Chat, E-Mail, Forums, games, CD-Roms,Online News	John Galt	Anaheim Hills ,CA
The New Professional Network BBS	(413)549-8136	Hundreds of software and is job openings nationwide, FREE	ADA, National Tech. Search/Eric Davis	Amherst ,MA
The Opowd Crowd	(708)885-8865	Specializing in outdoor activities and sports	KW Wroblewski	Hoffman Estates ,IL
The Other BBS 1:1/0	(717)657-2223	Fidonet Zone Coordinator for North America 1:1/0	George Peace	Harrisburg ,PA
The Well	(415)332-6106	Unix Conferencing System - $15 monthly plus $2 Hourly	Whole Earth Lectronic Link	Sausalito ,CA
Thunderbolt BBS	(703)373-9289	Various Files & Message Areas	John Schreiber	Falmouth ,VA
Tiger Team Buddhist Info Network	(510)268-0102	America's Buddhist Online Service	Gary L. Ray	Berkeley ,CA
Titan BBS	(904)476-1270	Adult BBS - Online Games - GIF Images	Clayton Manson	Pensacola ,FL
Tool Shop BBS	(818)891-6780	Home of HS-Link and other tools for PCBoard Systems	Sam Smith	San Fernando ,CA
Town Hall	(800)441-4142	Conservative Political Conference and Debate	National Review/Heritage Foundation	Washington ,DC
Trinity 1 BBS	44 392 410210	United Kingdom Distributor of Boardwatch Magazine	John Burden	Exeter Devon ,U.K.
TurBoard	(404)395-6327	NAPLPS Graphics BBS System	Software@work	Chattanooga ,TN
U.S. Robotics - Sit UBU Sit	(708)982-5092	Support for US Robotics HST 9600 bps Modems	U.S. Robotics Corporation	Skokie ,IL
US Naval Observatory BBS	(202)653-1079	Time - Date - Sunrise - Sunset - Enter @TCO for Commands	US Department of Commerce US Naval Obser	Washington ,D.C.
USDOE BBS	(202)260-9950	Currently available grants and contracts for Education	U.S. Dept. of Education/George Wagner	Washington D.C. ,
USGS Quick Epicenter Determin.	(303)273-8672	Earthquake Epicenter Data - Geomagnetism7E2 800-358-2663	US Geological Survey Earthquake Info Cnt	Denver ,CO
USNO Time of Day for Clocks	(202)653-0351	Xmits ASCII Time String - Sync Your PC to USNO Atomic Clock	US Naval Observatory	Washington ,D.C.
UT Library Online Catalog	(512)471-9420	Online Library Card Catalog Listing 3.5 million entries	University of Texas at Austin	Austin ,TX
WeatherBank	(800)827-2727	Online Weather Forecasts for Any City - Download Radar Data	Steve Root/WeatherBrief Data Services	Salt Lake City ,UT
Western Digital Tech Support	(714)753-1068	Hard Drive/Controller Installation and Config Data	Western Digital Corporation	Irvine ,CA
Westside, The	(213)933-4050	Area's Largest/Most Active Adult System-Chat,E-mail,Games,	Dave Harrison	Los Angeles ,CA
Wildcat HQ BBS 210/12	(805)873-2400	Multiline Support System for Wildcat BBS Software	MSI - Mustang Software, Inc.	Bakersfield ,CA
Windsor Manor	(203)688-4973	Over 27 Online Adventure Games	Jim Taylor	Windsor ,CT
Wizard's Gate,The	(614)224-1635	Multi-Line Totally Free BBS-Multi Player Games,Files,Message	Joseph G. Balshone	Columbus ,OH
Word Perfect Customer Support	(801)225-4444	Word Perfect 4.2/5.0/5.1 Support/Printer Drivers	Word Perfect Corporation	Orem ,UT
Worldview BBS	(510)676-2919	Reformed Protestant Topics; Telefinder Host	Bill Gram-Reefer	Concord ,CA
WWIV Support BBS	(310)208-6689	Support for WWIV BBS Software	Wayne Bell	Rolling Hills Estates ,CA
XTree BBS	(805)546-9150	Support for XTree Pro Gold DOS Shell Program	XTree Company	San Luis Obispo ,CA
XyQuest Support BBS	(508)667-5669	Support for XyWrite Word Processor - Custom Keyboard Files	XyQuest Inc. - Christine Madsen	Bellerica ,MA
Yellow Dream Machine BBS	(512)451-3222	Disability Rights Issues - Variety of Disability Newsletters	Bill Scarborough/Cyanosis Rex	Austin ,TX
Z/Max XChange UNIX BBS	(315)635-1947	Demo/online support for XChange UNIX BBS	Z/Max Computer Solutions, Inc.	Baldwinsville ,NY

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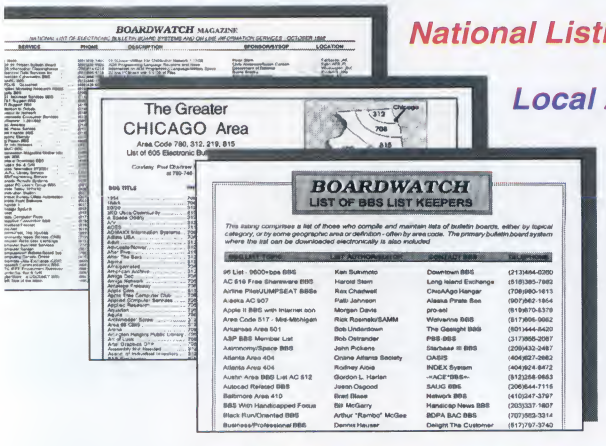

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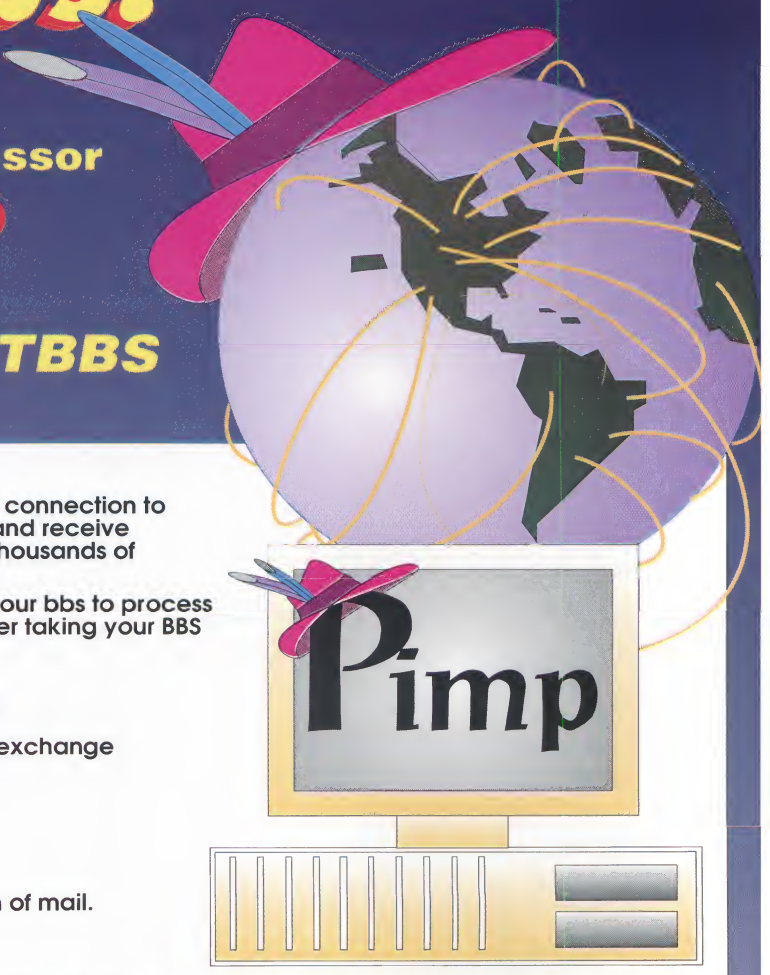

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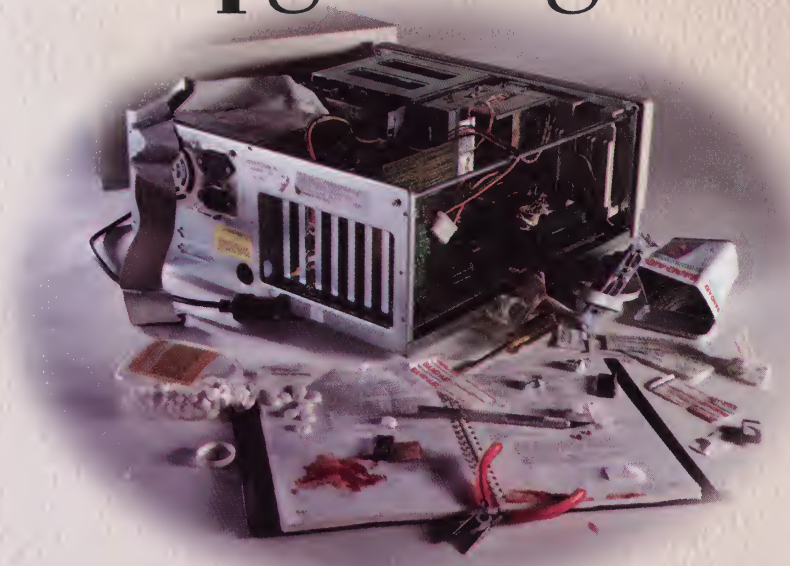

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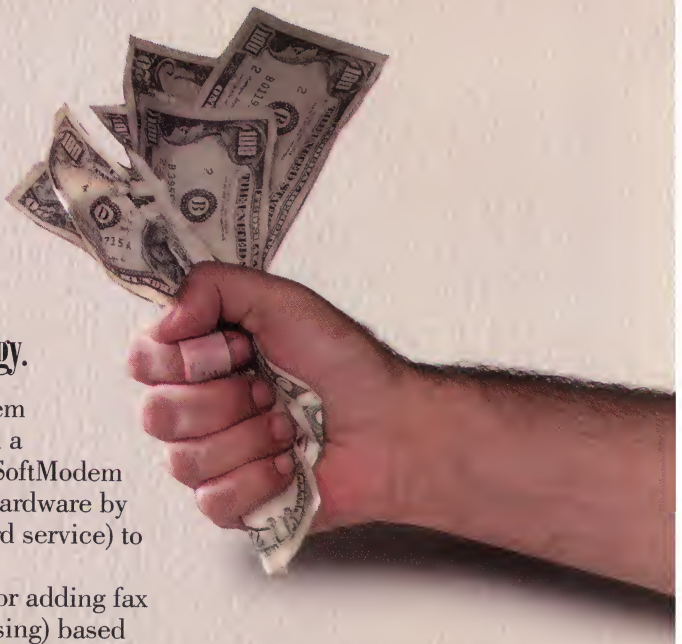

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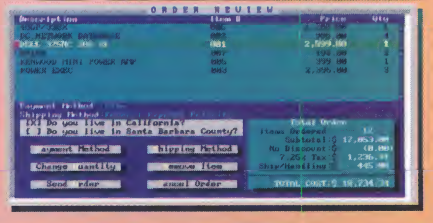

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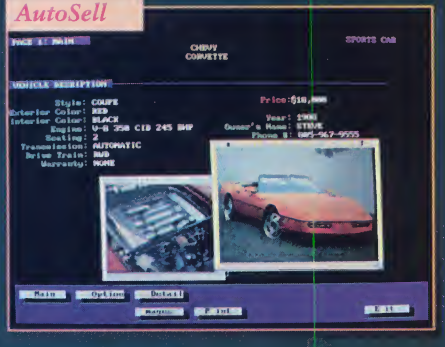

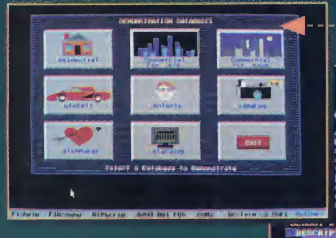

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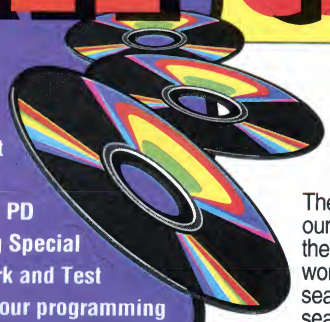

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